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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,053	07/07/2003	Jun Imamura	54-05A	6718

23713 7590 09/18/2007
GREENLEE WINNER AND SULLIVAN P C
4875 PEARL EAST CIRCLE
SUITE 200
BOULDER, CO 80301

EXAMINER

FOX, DAVID T

ART UNIT	PAPER NUMBER
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1638

MAIL DATE	DELIVERY MODE
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09/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/613,053

Applicant(s)

IMAMURA ET AL.

Examiner

David T. Fox

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 24-26, 28, 29, 32, 34, 37-41, 43, 44, 47, 53, 54, 59-64, 70 and 73-101 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-26, 28, 29, 32, 34, 37-41, 43, 44, 47, 53, 59-64, 70 and 73-100 is/are rejected.
- 7) ☒ Claim(s) 54 and 101 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. 10/451,366.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☒ Other: Sequence Search Results.

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Withdrawal from Issue

The indicated allowability of claims 24-26, 28-29, 32, 34, 37-41, 43-44, 47, 53, 59-64, 70 and 73-100 is withdrawn in view of the newly discovered reference(s) to Brown et al. Rejections based on the newly cited reference(s) follow.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 59-64, 70 and 73-100 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al (US 2003/126646 A1, effectively filed 21 July 2001).

The claims are broadly drawn to isolated DNA encoding a radish protein which restores male fertility, said protein having at least 97% homology to SEQ ID NO:3; vectors and transformants comprising it; wherein the transformants may be bacteria such as E. coli or Agrobacterium, plant cells or seeds or whole plants of the genus Brassica and the species Brassica napus; wherein the transformed Brassica plants may have glucosinolate contents of at most 30 or 12 micromoles/g seed, i.e. the canola standard; and methods for using said transformed Brassica plants to cross with cytoplasmic male sterile Brassica plants, for maintaining the male sterile plants.

Brown et al teach the instantly claimed subject matter (see, e.g., pages 1-4 and pages 16-23; claims 1-50, wherein SEQ ID NO:88 is the restorer protein encoded by

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"Gene 26" namely SEQ ID NO:89.) The attached Sequence Search results show that SEQ ID NO:88 taught by Brown et al is 99.2% homologous to instantly claimed SEQ ID NO:3. Furthermore, Brown et al teach a cDNA clone encoding this protein, with 99.0% similarity to instant SEQ ID NO:2; and a genomic clone encoding this protein, with at least 99.7% homology to SEQ ID NO:1.

Claims 24-26, 28-29, 32, 34, 37-41, 43-44, 47, 53, 59-64, 70 and 73-100 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al (US2003/0237112 A1, effectively filed 12 July 2001).

The newly included claims are drawn to isolated DNA which encode a protein with 100% homology to SEQ ID NO:3; as well as methods of its use to transform plants and restore male fertility, wherein the male sterility was derived from Ogura or Kosena radish.

Brown et al teach an isolated DNA encoding a radish fertility restoration protein comprising SEQ ID NO:179 (formerly SEQ ID NO: 129 encoded by "Gene 26"; sequence identifier changed during prosecution) which is 100% identical to SEQ ID NO:3 (see enclosed sequence search results), as well as transformants, wherein transformed Brassica or Brassica napus plants (including those with low glucosinolate levels) may be crossed to male sterile Brassica plants containing Kosena or Ogura-derived cytoplasm (see, e.g., pages 1-4 and 16-23; claims 1-44).

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Conclusion

Claims 54 and 101 are deemed free of the prior art, given the failure of the prior art to teach or reasonably suggest isolated DNA molecules comprising SEQ ID NOS:1-2 (see the attached Sequence Search results).

Claims 54 and 101 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (571) 272-0795. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg, can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 16, 2007

DAVID T. FOX
PRIMARY EXAMINER
GROUP 180 1638



10/6131053

ATTACHMENT TO OFFICE ACTION -

GenCore version 5.1.9
Copyright (c) 1993 - 2006 Bioceleration Ltd.

OM nucleic - nucleic search, using sw model

Run on: September 11, 2006, 15:07:03 ; Search time 1794.46 Seconds
(without alignments)
13695.093 Million cell updates/sec

Title: US-10-613-053A-1_COPY_1_2000
Perfect score: 2000
Sequence: 1 atttaaattttataacttaat.....gggattatattggttctaac 2000

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 18892170 seqs, 6143817638 residues

Total number of hits satisfying chosen parameters: 37784340

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published_Applications_NA_Main:*

- 1: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US07_PUBCOMB.seq:*
- 2: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US08_PUBCOMB.seq:*
- 3: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09A_PUBCOMB.seq:*
- 4: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
- 5: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09C_PUBCOMB.seq:*
- 6: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
- 7: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
- 8: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10C_PUBCOMB.seq:*
- 9: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10D_PUBCOMB.seq:*
- 10: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10E_PUBCOMB.seq:*
- 11: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
- 12: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10G_PUBCOMB.seq:*
- 13: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11A_PUBCOMB.seq:*
- 14: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11B_PUBCOMB.seq:*
- 15: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11C_PUBCOMB.seq:*
- 16: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11D_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

RESULT 3

US-10-195-144-87/c

; Sequence 87, Application US/10195144

; Publication No. US20030126646A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0136

; CURRENT APPLICATION NUMBER: US/10/195,144

; CURRENT FILING DATE: 2002-10-01

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 128

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: modified_base

; LOCATION: (144241)..(144300)

; OTHER INFORMATION: a, t, c, g, other or unknown

US-10-195-144-87

Query Match 99.8%; Score 1996.8; DB 7; Length 271990;

Best Local Similarity 99.9%; Pred. No. 3.2e-301;

Matches 1998; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1

ATTTAAATTTTATACTTAATATGTATTTAAACTCTCCAATGCAATAAGGGATA
TAAACAA 60

|||||

Db 174720
ATTTAAATTTTATACTTAATATGTATTTAAACTCTCCAATGCAATAAGGGATA
TAAACAA 174661

Qy 61
AAGGTATTCATAGATGTTATGTATTCGTACACCGATGTATTCGTATACCTTAA
ATATATG 120

Db 174660
AAGGTATTCATAGATGTTATGTATTCGTACACCGATGTATTCGTATACCTTAA
ATATATG 174601

Qy 121
TATACTTATGTATACATATACTTGTGTATTCGTACACCTTAAGTATTCGATGG
GTTATGT 180

Db 174600
TATACTTATGTATACATATACTTGTGTATTCGTACACCTTAAGTATTCGATGG
GTTATGT 174541

Qy 181
TGGTATTCGTATATTTTATGTATTTGTACACCTTATGTATACTTATGTATATGT
ACACCT 240

Db 174540
TGGTATTCGTATATTTTATGTATTTGTACACCTTATGTATACTTATGTATATGT
ACACCT 174481

Qy 241
TATGTATTTGTACATCTTAAGTATTAGATGAGTTATGTTGATATTCGTACACCT
TATGTA 300

Db 174480
TATGTATTTGTACATCTTAAGTATTAGATGAGTTATGTTGATATTCGTACACCT
TATGTA 174421

Qy 301
TTCGTACACCTTCTGTATACCTTAGGTATTCGTACACCTTAGGTATTTGTACAC
CTAAGG 360

Db 174420
TTCGTACACCTTCTGTATACCTTAGGTATTCGTACACCTTAGGTATTTGTACAC
CTAAGG 174361

Qy 361
TATTCGTACACCTTATGTATACTTATGTATACGTACACCTTATATATTCTGAAC
ACCTTAG 420

|||||

Db 174360
TATTCGTACACCTTATGTATACTTATGTATACGTACACCTTATATATTCTGAAC
ACCTTAG 174301

Qy 421
ATATTCGTACATCTTATGTATACGTATACTTATTTCTTGAGTTATAGTGAATTA
GATTGT 480

|||||

Db 174300
ATATTCGTACATCTTATGTATACGTATACTTATTTCTTGAGTTATAGTGAATTA
GATTGT 174241

Qy 481
ATTAAACGTTAGACATAGGGTTCCGGATTTATCCAAGGGTTCCAGATTGTTTC
AGATTCT 540

|||||

Db 174240
ATTAAACGTTAGACATAGGGTTCCGGATTTATCCAAGGGTTCCAGATTGTTTC
AGATTCT 174181

Qy 541
GGATTTACCCAATGGTTCTGGATTTACCCAAGGGTTCCGGATTAGGATTCAA
GGTTTAG 600

|||||

Db 174180
GGATTTACCCAATGGTTCTGGATTTACCCAAGGGTTCCGGATTAGGATTCAA
GGTTTAG 174121

Qy 601
AGTTTAGGATTTTAGGTTTAGTGTTTTGTTGATGATTTTTAATATTTAAGATAA
ATGTAG 660

|||||

Db 174120
AGTTTAGGATTTTAGGTTTAGTGTTTTGTTGATGATTTTTAATATTTAAGATAA
ATGTAG 174061

Qy 661
ACAAATTTGTTCTTCCTACCATTTTGACAAAAAATGAAAGATCTATGTAGGTT
TCCAAGT 720

|||||

Db 174060
ACAAATTTGTTCTTCCTACCATTTTGACAAAAAATGAAAGATCTATGTAGGTT
TCCAAGT 174001

Qy 721
TTATTAAATTTACCCAGATTTATGAAAATTATCCATAAATTTATATAATTTTAT
GAATAA 780

|||||
Db 174000
TTATTAAATTTACCCAGATTTATGAAAATTATCCATAAATTTATATAATTTTAT
GAATAA 173941

Qy 781
TTTATCATTTATTTGGGTAAATTTTCATAAATATGAAAGTTTCTTTTATGGGTCA
AAATGT 840

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Db 173940
TTTATCATTTATTTGGGTAAATTTTCATAAATATGAAAGTTTCTTTTATGGGTCA
AAATGT 173881

Qy 841
ATAATTTATTCGGATTCTGGATTTACCCAAGGGTTCCGGATTACCCAAGGAT
TCCAGAT 900

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Db 173880
ATAATTTATTCGGATTCTGGATTTACCCAAGGGTTCCGGATTACCCAAGGAT
TCCAGAT 173821

Qy 901
TTAGGATTCATGGTTTAGAGTTTAGGAGTTTATGTTTAGTGTTTTGTTGATGAT
TTTAAA 960

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Db 173820
TTAGGATTCATGGTTTAGAGTTTAGGAGTTTATGTTTAGTGTTTTGTTGATGAT
TTTAAA 173761

Qy 961
TATTTAAGATAAGAAGTTTATGCGAGAGAATTTGGTCAAACCTCAGGTTGAGT
CTTAACTT 1020

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Db 173760
TATTTAAGATAAGAAGTTTATGCGAGAGAATTTGGTCAAACCTCAGGTTGAGT
CTTAACTT 173701

Qy 1021
CTTAAGACATAAAAATCACTAGATACTTGACATGGAGGCACCAAATTATCCT
ATATTTTT 1080

|||||

Db 173700
CTTAAGACATAAAAATCACTAGATACTTGACATGGAGGCACCAAATTATCCT
ATATTTTT 173641

Qy 1081
TGGACTTAATCTTGGTGTACCCCTAGAGTAAACCTTAAGGTTACCAACCAAT
AGAAATC 1140

|||||

Db 173640
TGGACTTAATCTTGGTGTACCCCTAGAGTAAACCTTAAGGTTACCAACCAAT
AGAAATC 173581

Qy 1141
ACTCATTTACAGTTGATATCTTTTAAAAAAGTAAACAAAATATTGTCGAGTT
ATATTAC 1200

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Db 173580
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ATATTAC 173521

Qy 1201
ATTTTAAATAAAAAATATTAATAAATAAATAAATAATATATGCAAAAAAA
AAGATTTT 1260

|||||

Db 173520
ATTTTAAATAAAAAATATTAATAAATAAATAAATAATATATGCAAAAAAA
AAGATTTT 173461

Qy 1261
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TAAACCC 1320

|||||

Db 173460
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TAAACCC 173401

Qy 1321
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AAGATTT 1380

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Db 173400
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AAGATTT 173341

Qy 1381
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ATGATT 1440

|||||
Db 173340
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ATGATT 173281

Qy 1441
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TATCCAA 1500

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Db 173280
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TATCCAA 173221

Qy 1501
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AGAATTT 1560

|||||
Db 173220
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AGAATTT 173161

Qy 1561
AGGGTTTAGGGTTTAGAGTTTAAAATTATCCAAGGGTTTAGGGTATACCCAA
GGGTTTAG 1620

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Db 173160
AGGGTTTAGGGTTTAGAGTTTAAAATTATCCAAGGGTTTAGGGTATACCCAA
GGGTTTAG 173101

Qy 1621
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TTTTCAA 1680

|||||
Db 173100
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TTTTCAA 173041

Qy 1681
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AACAT 1740

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Db 173040
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AACAT 172981

Qy 1741
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ATACTTG 1800

|||||

Db 172980
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ATACTTG 172921

Qy 1801
ATTCCTATTGGTTGGGTGAACCTAAATGTTCACTCTAGGGGTGAACCTAAGGA
TAACTCT 1860

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Db 172920
ATTCCTATTGGTTGGGTGAACCTAAATGTTCACTCTAGGGGTGAACCTAAGGA
TAACTCT 172861

Qy 1861
ATTTTTTGGGGTGAAATAGCACTATAGCGGATATCTTTTTCAATAGATTATAA
GCACGGC 1920

|||||

Db 172860
ATTTTTTGGGGTGAAATAGCACTATAGCGGATATCTTTTTCAATAGATTATAA
GCACGGC 172801

Qy 1921
TCTACCTATGACTAATCAAGAACTTGGGATGATTGGAAATCTGCAGGTTGTAC
TCAATAT 1980

|||||

Db 172800
TCTACCTATGACTAGTCAAGAACTTGGGATGATTGGAAATCTGCAGGTTGTAC
TCAATAT 172741

Qy 1981 GGGATTATATTGGTTCTAAC 2000

|||||

Db 172740 GGGATTATATTGGTTCTAAC 172721

RESULT 4

US-10-345-072-87/c

; Sequence 87, Application US/10345072

; Publication No. US20030237112A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; APPLICANT: LAI, FANG MING

; APPLICANT: LEFOREST, MARTIN

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0210

; CURRENT APPLICATION NUMBER: US/10/345,072

; CURRENT FILING DATE: 2003-01-16

; PRIOR APPLICATION NUMBER: PCT/US02/22217

; PRIOR FILING DATE: 2002-07-12

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 179

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: modified_base

; LOCATION: (144241)..(144300)

; OTHER INFORMATION: a, t, c, g, other or unknown

US-10-345-072-87

Query Match 99.8%; Score 1996.8; DB 7; Length 271990;

Best Local Similarity 99.9%; Pred. No. 3.2e-301;

Matches 1998; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

Qy 1

ATTTAAATTTTATACTTAATATGTATTTAAACTCTCCAATGCAATAAGGGATA
TAAACAA 60

|||||

Db 174720
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TAAACAA 174661

Qy 61
AAGGTATTCATAGATGTTATGTATTCGTACACCGATGTATTCGTATACCTTAA
ATATATG 120

|||||
Db 174660
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ATATATG 174601

Qy 121
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GTTATGT 180

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Db 174600
TATACTTATGTATACATATACTTGTGTATTCGTACACCTTAAGTATTCGATGG
GTTATGT 174541

Qy 181
TG GTATTCGTATATTTTATGTATTTGTACACCTTATGTATACTTATGTATATGT
ACACCT 240

|||||
Db 174540
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ACACCT 174481

Qy 241
TATGTATTTGTACATCTTAAGTATTAGATGAGTTATGTTGATATTCGTACACCT
TATGTA 300

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Db 174480
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TATGTA 174421

Qy 301
TTCGTACACCTTCTGTATACCTTAGGTATTCGTACACCTTAGGTATTTGTACAC
CTAAGG 360

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Db 174420
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CTAAGG 174361

Qy 361
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ACCTTAG 420

|||||

Db 174360
TATTCGTACACCTTATGTATACTTATGTATACGTACACCTTATATATTCTGAAC
ACCTTAG 174301

Qy 421
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GATTGT 480

|||||

Db 174300
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GATTGT 174241

Qy 481
ATTAAACGTTAGACATAGGGTTCCGGATTTATCCAAGGGTTCCAGATTGTTTC
AGATTCT 540

|||||

Db 174240
ATTAAACGTTAGACATAGGGTTCCGGATTTATCCAAGGGTTCCAGATTGTTTC
AGATTCT 174181

Qy 541
GGATTTACCCAATGGTTCTGGATTTACCCAAGGGTTCCGGATTTAGGATTCAA
GGTTTAG 600

|||||

Db 174180
GGATTTACCCAATGGTTCTGGATTTACCCAAGGGTTCCGGATTTAGGATTCAA
GGTTTAG 174121

Qy 601
AGTTTAGGATTTTAGGTTTAGTGTTTTGTTGATGATTTTTAATATTTAAGATAA
ATGTAG 660

|||||

Db 174120
AGTTTAGGATTTTAGGTTTAGTGTTTTGTTGATGATTTTTAATATTTAAGATAA
ATGTAG 174061

Qy 661
ACAAATTTGTTCTTCCTACCATTTTGACAAAAAATGAAAGATCTATGTAGGTT
TCCAAGT 720

|||||

Db 174060
ACAAATTTGTTCTTCCTACCATTTTGACAAAAAATGAAAGATCTATGTAGGTT
TCCAAGT 174001

Qy 721
TTATTAAATTTACCCAGATTTATGAAAATTATCCATAAATTTATATAATTTTAT
GAATAA 780

|||||

Db 174000
TTATTAAATTTACCCAGATTTATGAAAATTATCCATAAATTTATATAATTTTAT
GAATAA 173941

Qy 781
TTTATCATTTATTTGGGTAAATTTTCATAAATATGAAAGTTTCTTTTATGGGTCA
AAATGT 840

|||||

Db 173940
TTTATCATTTATTTGGGTAAATTTTCATAAATATGAAAGTTTCTTTTATGGGTCA
AAATGT 173881

Qy 841
ATAATTTATTCGGATTCTGGATTTACCCAAGGGTTCCGGATTACCCAAGGAT
TCCAGAT 900

|||||

Db 173880
ATAATTTATTCGGATTCTGGATTTACCCAAGGGTTCCGGATTACCCAAGGAT
TCCAGAT 173821

Qy 901
TTAGGATTCATGGTTTAGAGTTTAGGAGTTTATGTTTAGTGTTTTGTTGATGAT
TTTAA 960

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Db 173820
TTAGGATTCATGGTTTAGAGTTTAGGAGTTTATGTTTAGTGTTTTGTTGATGAT
TTTAA 173761

Qy 961
TATTTAAGATAAGAAGTTTATGCGAGAGAATTTGGTCAAACCTCAGGTTGAGT
CTTAACTT 1020

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Db 173760
TATTTAAGATAAGAAGTTTATGCGAGAGAATTTGGTCAAACCTCAGGTTGAGT
CTTAACTT 173701

Qy 1021
CTTAAGACATAAAAATCACTAGATACTTGACATGGAGGCACCAAATTATCCT
ATATTTTT 1080

|||||

Db 173700
CTTAAGACATAAAAATCACTAGATACTTGACATGGAGGCACCAAATTATCCT
ATATTTTT 173641

Qy 1081
TGGACTTAATCTTGGTGTACCCCTAGAGTAAACCTTAAGGTTACCAACCAAT
AGAAATC 1140

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Db 173640
TGGACTTAATCTTGGTGTACCCCTAGAGTAAACCTTAAGGTTACCAACCAAT
AGAAATC 173581

Qy 1141
ACTCATTTACAGTTGATATCTTTTAAAAAAGTAAACAAAATATTGTCGAGTT
ATATTAC 1200

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Db 173580
ACTCATTTACAGTTGATATCTTTTAAAAAAGTAAACAAAATATTGTCGAGTT
ATATTAC 173521

Qy 1201
ATTTTAAATAAAAAATATTAATAAATAAATAAATAATATATGCAAAAAAA
AAGATTTT 1260

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Db 173520
ATTTTAAATAAAAAATATTAATAAATAAATAAATAATATATGCAAAAAAA
AAGATTTT 173461

Qy 1261
TTAAAAAGATTTTAATTTTCGTCAACAAAACACTAAACTCTAAACTCTAAATCC
TAAACCC 1320

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Db 173460
TTAAAAAGATTTTAATTTTCGTCAACAAAACACTAAACTCTAAACTCTAAATCC
TAAACCC 173401

Qy 1321
TTGGATAAATACTAAACCCTAAATTAAAAACATTAAACCATAATAGTATTTTT
AAGATTT 1380

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Db 173400
TTGGATAAATACTAAACCCTAAATTAAAAACATTAAACCATAATAGTATTTTT
AAGATTT 173341

Qy 1381
AATGTTTTAGTGTTTAGTGTTTTTGATTAGAAATTTAGGATTATCCAAGTGTTT
ATGATT 1440

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Db 173340
AATGTTTTAGTGTTTAGTGTTTTTGATTAGAAATTTAGGATTATCCAAGTGTTT
ATGATT 173281

Qy 1441
TATCCAAGGGTTTAGGGTTTAGAATTTAGGGTTTAGGGTTTAGAGTTTAAAT
TATCCA 1500

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Db 173280
TATCCAAGGGTTTAGGGTTTAGAATTTAGGGTTTAGGGTTTAGAGTTTAAAT
TATCCA 173221

Qy 1501
GGGTCTAGGGTATACCCAAGGGTTTAGGGTTTAGGATTTAGGGTTTAGGGTTT
AGAATT 1560

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Db 173220
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AGAATT 173161

Qy 1561
AGGGTTTAGGGTTTAGAGTTTAAATTTATCCAAGGGTTTAGGGTATACCCAA
GGGTTTAG 1620

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Db 173160
AGGGTTTAGGGTTTAGAGTTTAAATTTATCCAAGGGTTTAGGGTATACCCAA
GGGTTTAG 173101

Qy 1621
GGTTTAGGATTTAGGGTTTAAGGTTTAGTGTTTTTGACGATATTAAAAATAG
TTTTCAA 1680

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Db 173100
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TTTTCAA 173041

Qy 1681
AAATTCATTTTTTTGTAACGGCTATTATTTTTTTTTTATATTTTATTTATTTTAAA
AACAT 1740

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Db 173040
AAATTCATTTTTTTGTAACGGCTATTATTTTTTTTTTATATTTTATTTATTTTAAA
AACAT 172981

Qy 1741
AATATAACTTGACAATATTTTCTTTTCTTTTAAAAAAAATATTAATTATGAA
ATACTTG 1800

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Db 172980
AATATAACTTGACAATATTTTCTTTTCTTTTAAAAAAAATATTAATTATGAA
ATACTTG 172921

Qy 1801
ATTCCTATTGGTTGGGTGAACCTAAATGTTCACTCTAGGGGTGAACCTAAGGA
TAACTCT 1860

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Db 172920
ATTCCTATTGGTTGGGTGAACCTAAATGTTCACTCTAGGGGTGAACCTAAGGA
TAACTCT 172861

Qy 1861
ATTTTTTGGGGTGAAATAGCACTATAGCGGATATCTTTTTCAATAGATTATAA
GCACGGC 1920

|||||

Db 172860
ATTTTTTGGGGTGAAATAGCACTATAGCGGATATCTTTTTCAATAGATTATAA
GCACGGC 172801

Qy 1921
TCTACCTATGACTAATCAAGAACTTGGGATGATTGGAAATCTGCAGGTTGTAC
TCAATAT 1980

|||||

Db 172800
TCTACCTATGACTAGTCAAGAACTTGGGATGATTGGAAATCTGCAGGTTGTAC
TCAATAT 172741

Qy 1981 GGGATTATATTGGTTCTAAC 2000

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Db 172740 GGGATTATATTGGTTCTAAC 172721

OM nucleic - nucleic search, using sw model

Run on: September 11, 2006, 15:07:03 ; Search time 1572.84 Seconds
(without alignments)
13695.093 Million cell updates/sec

Title: US-10-613-053A-1_COPY_2001_3753

Perfect score: 1753

Sequence: 1 aagtagatatgaccttgaa.....ttcggatttcgattttgg 1753

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 18892170 seqs, 6143817638 residues

Total number of hits satisfying chosen parameters: 37784340

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published_Applications_NA_Main:*

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- 2: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US08_PUBCOMB.seq:*
- 3: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09A_PUBCOMB.seq:*
- 4: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
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- 15: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11C_PUBCOMB.seq:*
- 16: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11D_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

RESULT 3

US-10-195-144-87/c

; Sequence 87, Application US/10195144

; Publication No. US20030126646A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0136

; CURRENT APPLICATION NUMBER: US/10/195,144

; CURRENT FILING DATE: 2002-10-01

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 128

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: modified_base

; LOCATION: (144241)..(144300)

; OTHER INFORMATION: a, t, c, g, other or unknown

US-10-195-144-87

Query Match 99.7%; Score 1748.2; DB 7; Length 271990;

Best Local Similarity 99.8%; Pred. No. 3.5e-220;

Matches 1750; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1

AAGTAGATATGATCCTTGAAAATTAAAGTTATTAGATCAGTTCATCGTGAAA
GGTGTAGG 60

|||||

Db 172720
AAGTAGATATGATCCTTGAAAATTAAAGTTATTAGATCAGTTCATCGTGAAA
GGTGTAGG 172661

Qy 61
GTTTGTCAATTTTATTAACAAATTTGTCATTTTATTAACAATTTTGTCAATTTTA
TAAACA 120

|||||
Db 172660
GTTTGTCAATTTTATTAACAAATTTGTCATTTTATTAACAATTTTGTCAATTTTA
TAAACA 172601

Qy 121
TGAAAATTATAACGAATGCACTTTGCTGCCAGATCCCAATTTGTCATTTTATT
TTTGGGA 180

|||||
Db 172600
TGAAAATTATAACGAATGCACTTTGCTGCCAGATCCCAATTTGTCATTTTATT
TTTGGGA 172541

Qy 181
AAAAAATGTAGCATTTTCGTGAGTGTTTCTATTTTTGGCAAAAACAAAAGTGT
GAGATCA 240

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Db 172540
AAAAAATGTAGCATTTTCGTGAGTGTTTCTATTTTTGGCAAAAACAAAAGTGT
GAGATCA 172481

Qy 241
ATTTTGACCAAAAAAAAAAATGTAAGATTCACGTAGGTTTCCAAATTTATTAAAT
TTACCCA 300

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Db 172480
ATTTTGACCAAAAAAAAAAATGTAAGATTCACGTAGGTTTCCAAATTTATTAAAT
TTACCCA 172421

Qy 301
ACTATATTAATAATGTAAGATTCACGTAGGTTTCCAAATTTATTAAAT
AATGAAG 360

|||||
Db 172420
ACTATATTAATAATGTAAGATTCACGTAGGTTTCCAAATTTATTAAAT
AATGAAG 172361

Qy 361
GATCTATGAAGGTTTCCAAGTTTATTAAATTTACTCAGATTTATGATAATTAT
CCATAAA 420

|||||

Db 172360
GATCTATGAAGGTTTCCAAGTTTATTAAATTTACTCAGATTTATGATAATTAT
CCATAAA 172301

Qy 421
TTTACATAATTTTATGAATTATCATTTATTTGGGTAGATTTCATAAATATGAA
AGTTTCT 480

|||||

Db 172300
TTTACATAATTTTATGAATTATCATTTATTTGGGTAGATTTCATAAATATGAA
AGTTTCT 172241

Qy 481
TTTATGAGTCAAAATGTATAATTTATTGGGTAACTTTCATAAATTTTAGAATT
TACATCG 540

|||||

Db 172240
TTTATGAGTCAAAATGTATAATTTATTGGGTAACTTTCATAAATTTTAGAATT
TACATCG 172181

Qy 541
ATTTTATATTAATTCGTATAGATTTATGTTGACTTTATATATGAAAAAATATGT
ATTATA 600

|||||

Db 172180
ATTTTATATTAATTCGTATAGATTTATGTTGACTTTATATATGAAAAAATATGT
ATTATA 172121

Qy 601
TTAAAAGTAGTTGCTCATATATGATTTTAAATATTAAATATGATCCAAAAGT
TTAATGA 660

|||||

Db 172120
TTAAAAGTAGTTGCTCATATATGATTTTAAATATTAAATATGATCCAAAAGT
TTAATGA 172061

Qy 661
ATAAAGAATGTTTATGGAATTTACAAAAGTTAGTTGTTAAAAGTTAGTGGGA
AAAAAATT 720

|||||

Db 172060
ATAAAGAATGTTTATGGGATTTACAAAAGTTAGTTGTTAAAAGTTAGTGGGA
AAAAAATT 172001

Qy 721
ATTTTTTATAGGCAAAGTGGATTTTGGGTCCCACGAAATTACTTTTCCAACCT
GCCAAGT 780

|||||

Db 172000
ATTTTTTATAGGCAAAGTGGATTTTGGGTCCCACGAAATTACTTTTCCAACCT
GCCAAGT 171941

Qy 781
TTAATAGGCAAAAAGGTTAAAAATGTCATAAATTTATTCTCTCTCTACTAGGT
TGCCCAA 840

|||||

Db 171940
TTAATAGGCAAAAAGGTTAAAAATGTCATAAATTTATTCTCTCTCTACTAGGT
TGCCCAA 171881

Qy 841
TTGCCTAATATAAACTTGAGGTGGCCTATTTTCTAATTCAAACCTAAAAGTT
GCCCTTT 900

|||||

Db 171880
TTGCCTAATATAAACTTGAGGTGGCCTATTTTCTAATTCAAACCTAAAAGTT
GCCCTTT 171821

Qy 901
CCCCTAATTGACCCATAAAAGAATGAAAGACATTTTCTTTTCCAAATTACAA
TCCCTAG 960

|||||

Db 171820
CCCCTAATTGACCCATAAAAGAATGAAAGACATTTTCTTTTCCAAATTACAA
TCCCTAG 171761

Qy 961
ATAATTTTATTTTGTAGGTGCATTCCATCGGTTATGATTACAGAATAGCTACG
CTTCTCT 1020

|||||

Db 171760
ATAATTTTATTTTGTAGGTGCATTCCATCGGTTATGATTACAGAATAGCTACG
CTTCTCT 171701

Qy 1021
ATTGATTCTTATTGCGCCGTTGGTGACGTTTTCCATGGAATCAAGTAGTGTTTT
ATCTCC 1080

|||||

Db 171700
ATTGATTCTTATTGCGCCGTTGGTGACGTTTTCCATGGAATCAAGTAGTGTTTT
ATCTCC 171641

Qy 1081
TATCACTAACAACATATTCATAGATTTTGTTTATCACTTGTTCTGTGTTTCCTGA
TCATAT 1140

|||||

Db 171640
TATCACTAACAACATATTCATAGATTTTGTTTATCACTTGTTCTGTGTTTCCTGA
TCATAT 171581

Qy 1141
ACTTGACTCAGTTTCTGTGATTTTCATCAAGTTTTTGAGAACAGAAGAAGCAAA
AAAGAAA 1200

|||||

Db 171580
ACTTGACTCAGTTTCTGTGATTTTCATCAAGTTTTTGAGAACAGAAGAAGCAAA
AAAGAAA 171521

Qy 1201
ACGAGCAGAGCTGCTCTTACAATGTTTTAACCGTGAGTGATAAATTTATTTAC
ATAAAAG 1260

|||||

Db 171520
ACGAGCAGAGCTGCTCTTACAATGTTTTAACCGTGAGTGATAAATTTATTTAC
ATAAAAG 171461

Qy 1261
TATTTTAAAAATAGATTTAATCAACCAATTTAATATATTATTTTATATTTAGTT
CATTTT 1320

|||||

Db 171460
TATTTTAAAAATAGATTTAATCAACCAATTTAATATATTATTTTATATTTAGTT
CATTTT 171401

Qy 1321
TTTTTGACATCTTTTATATTTAGTTTAGAACACCTCTATTTGAGTACAACATAG
ATTATA 1380

|||||

Db 171400
TTTTTGACATCTTTTATATTTAGTTTAGAACACCTCTATTTGAGTACAACATAG
ATTATA 171341

Qy 1381
ATGATAAATTTATAAAAATAGCATAATTTTTTATTTTCATTGTTTTATGATAAAA
TTCTAA 1440

|||||
Db 171340
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TTCTAA 171281

Qy 1441
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ATTATTT 1500

|||||
Db 171280
ATAACAATAATTATAATATTATTATATTACTAATTGCAAAAATTAATTAATAC
ATTATTT 171221

Qy 1501
TATAATAAATATTTAAAACGTTGGGTAGGATTTTGTTAGATTTTTTTTCAACAA
ATTTTGT 1560

|||||
Db 171220
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ATTTTGT 171161

Qy 1561
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ATTATT 1620

|||||
Db 171160
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ATTATT 171101

Qy 1621
AAGATTTAATATAAATAAACATATATGTCATATTAAATATTTAACATAAGTGGT
CCTAATC 1680

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Db 171100
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CCTAATC 171041

Qy 1681

TTTGAAGTGGGGTGGGCGTTCGGGTACCTATTCGGGTTTCGGTTCGAGTCTA
TTCGGAT 1740

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Db 171040

TTTGAAGTGGGGTGGGCGTTCGGGTACCTATTCGGGTTTCGGTTCGAGTCTA
TTCGGAT 170981

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Db 170980 TTCGGATTTTGG 170968

RESULT 4

US-10-345-072-87/c

; Sequence 87, Application US/10345072

; Publication No. US20030237112A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; APPLICANT: LAI, FANG MING

; APPLICANT: LEFOREST, MARTIN

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0210

; CURRENT APPLICATION NUMBER: US/10/345,072

; CURRENT FILING DATE: 2003-01-16

; PRIOR APPLICATION NUMBER: PCT/US02/22217

; PRIOR FILING DATE: 2002-07-12

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 179

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:
; NAME/KEY: modified_base
; LOCATION: (144241)..(144300)
; OTHER INFORMATION: a, t, c, g, other or unknown
US-10-345-072-87

Query Match 99.7%; Score 1748.2; DB 7; Length 271990;
Best Local Similarity 99.8%; Pred. No. 3.5e-220;
Matches 1750; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1
AAGTAGATATGATCCTTGAAAATTAAAGTTATTAGATCAGTTCATCGTGAAA
GGTGTAGG 60

|||||
Db 172720
AAGTAGATATGATCCTTGAAAATTAAAGTTATTAGATCAGTTCATCGTGAAA
GGTGTAGG 172661

Qy 61
GTTTGTCAATTTTATTAACAAATTTGTCATTTTATTAACAATTTTGTCAATTTA
TAAACA 120

|||||
Db 172660
GTTTGTCAATTTTATTAACAAATTTGTCATTTTATTAACAATTTTGTCAATTTA
TAAACA 172601

Qy 121
TGAAAATTATAACGAATGCACTTTGCTGCCAGATCCCAATTTGTCATTTTATT
TTTGGA 180

|||||
Db 172600
TGAAAATTATAACGAATGCACTTTGCTGCCAGATCCCAATTTGTCATTTTATT
TTTGGA 172541

Qy 181
AAAAAATGTAGCATTTTCGTGAGTGTTTCTATTTTGGCAAAAACAAAAGTGT
GAGATCA 240

|||||
Db 172540
AAAAAATGTAGCATTTTCGTGAGTGTTTCTATTTTGGCAAAAACAAAAGTGT
GAGATCA 172481

Qy 241
ATTTTGACCAAAAAAAAAATGTAAGATTCACGTAGGTTTCCAAATTTATTAAAT
TTACCA 300

|||||

Db 172480
ATTTTGACCAAAAAAAAAAATGTAAGATTCACGTAGGTTTCCAAATTTATTAAAT
TTACCCA 172421

Qy 301
ACTATATTAATAATTAATGTAGACAAATTTGTTTTCTGCCATTTTGGCAAAA
AATGAAG 360

|||||
Db 172420
ACTATATTAATAATTAATGTAGACAAATTTGTTTTCTGCCATTTTGGCAAAA
AATGAAG 172361

Qy 361
GATCTATGAAGGTTTCCAAGTTTATTAAATTTACTCAGATTTATGATAATTAT
CCATAAA 420

|||||
Db 172360
GATCTATGAAGGTTTCCAAGTTTATTAAATTTACTCAGATTTATGATAATTAT
CCATAAA 172301

Qy 421
TTTACATAATTTTATGAATTATCATTTATTTGGGTAGATTTTCATAAATATGAA
AGTTTCT 480

|||||
Db 172300
TTTACATAATTTTATGAATTATCATTTATTTGGGTAGATTTTCATAAATATGAA
AGTTTCT 172241

Qy 481
TTTATGAGTCAAAATGTATAATTTATTGGGTAACTTTCATAAATTTTAGAATT
TACATCG 540

|||||
Db 172240
TTTATGAGTCAAAATGTATAATTTATTGGGTAACTTTCATAAATTTTAGAATT
TACATCG 172181

Qy 541
ATTTTATATTAATTCGTATAGATTTATGTTGACTTTATATATGAAAAAATATGT
ATTATA 600

|||||
Db 172180
ATTTTATATTAATTCGTATAGATTTATGTTGACTTTATATATGAAAAAATATGT
ATTATA 172121

Qy 601
TTAAAAGTAGTTGCTCATATATGATTTTTTAAATATTAAATATGATCCAAAAGT
TTAATGA 660

|||||
Db 172120
TTAAAAGTAGTTGCTCATATATGATTTTTTAAATATTAAATATGATCCAAAAGT
TTAATGA 172061

Qy 661
ATAAAGAATGTTTATGGAATTTACAAAAGTTAGTTGTTAAAAGTTAGTGGGA
AAAAAATT 720

|||||
Db 172060
ATAAAGAATGTTTATGGGATTTACAAAAGTTAGTTGTTAAAAGTTAGTGGGA
AAAAAATT 172001

Qy 721
ATTTTTTATAGGCAAAGTGGATTTTGGGTCCCACGAAATTACTTTTCCAACCT
GCCAAGT 780

|||||
Db 172000
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GCCAAGT 171941

Qy 781
TTAATAGGCAAAAAGGTTAAAAATGTCATAAATTTATTCTCTCTCTACTAGGT
TGCCCAA 840

|||||
Db 171940
TTAATAGGCAAAAAGGTTAAAAATGTCATAAATTTATTCTCTCTCTACTAGGT
TGCCCAA 171881

Qy 841
TTGCCTAATATAAACTTGAGGTGGCCTATTTTTCTAATTCAAACCTAAAAGTT
GCCCTTT 900

|||||
Db 171880
TTGCCTAATATAAATTTGAGGTGGCCTATTTTCCTAATTCAAACCTAAAAGTT
GCCCTTT 171821

Qy 901
CCCCTAATTGACCCATAAAAGAATGAAAGACATTTTTCTTTTCCAAATTACAA
TCCCTAG 960

|||||

Db 171820
CCCCTAATTGACCCATAAAAGAATGAAAGACATTTTCTTTTCCAAATTACAA
TCCCTAG 171761

Qy 961
ATAATTTTATTTTGTAGGTGCATTCCATCGGTTATGATTACAGAATAGCTACG
CTTCTCT 1020

|||||

Db 171760
ATAATTTTATTTTGTAGGTGCATTCCATCGGTTATGATTACAGAATAGCTACG
CTTCTCT 171701

Qy 1021
ATTGATTCTTATTGCGCCGTTGGTGACGTTTCCATGGAATCAAGTAGTGTTTT
ATCTCC 1080

|||||

Db 171700
ATTGATTCTTATTGCGCCGTTGGTGACGTTTCCATGGAATCAAGTAGTGTTTT
ATCTCC 171641

Qy 1081
TATCACTAACAACATATTCATAGATTTTGTTTATCACTTGTTCTGTGTTCTGA
TCATAT 1140

|||||

Db 171640
TATCACTAACAACATATTCATAGATTTTGTTTATCACTTGTTCTGTGTTCTGA
TCATAT 171581

Qy 1141
ACTTGACTCAGTTTCTGTGATTTTCATCAAGTTTTTGAGAACAGAAGAAGCAAA
AAAGAAA 1200

|||||

Db 171580
ACTTGACTCAGTTTCTGTGATTTTCATCAAGTTTTTGAGAACAGAAGAAGCAAA
AAAGAAA 171521

Qy 1201
ACGAGCAGAGCTGCTCTTACAATGTTTAAACCGTGAGTGATAAATTTATTAC
ATAAAAG 1260

|||||

Db 171520
ACGAGCAGAGCTGCTCTTACAATGTTTAAACCGTGAGTGATAAATTTATTAC
ATAAAAG 171461

Qy 1261
TATTTTAAAAATAGATTTAATCAACCAATTTAATATATTATTTTATATTTAGTT
CATTTT 1320

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Db 171460
TATTTTAAAAATAGATTTAATCAACCAATTTAATATATTATTTTATATTTAGTT
CATTTT 171401

Qy 1321
TTTTTGACATCTTTTATATTTAGTTTGAACACCTCTATTTGAGTACAACATAG
ATTATA 1380

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Db 171400
TTTTTGACATCTTTTATATTTAGTTTGAACACCTCTATTTGAGTACAACATAG
ATTATA 171341

Qy 1381
ATGATAAATTTATAAAAATAGCATAATTTTTTATTTTCATTGTTTTATGATAAAA
TTCTAA 1440

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Db 171340
ATGATAAATTTATAAAAATAGCATAATTTTTTATTTTCATTGTTTTATGATAAAA
TTCTAA 171281

Qy 1441
ATAACAATAATTATAATATTATTATATTACTAATTGCAAAAATTAATTAATAC
ATTATTT 1500

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Db 171280
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ATTATTT 171221

Qy 1501
TATAATAAATATTTAAAACGTTGGGTAGGATTTTGTTAGATTTTTTTCAACAA
ATTTTGT 1560

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Db 171220
TATAATAAATATTTAAAACGTTGGGTAGGATTTTGTTAGATTTTTTTCAACAA
ATTTTGT 171161

Qy 1561
TATAGCTAAAATAAAATTCAAATGTATTGTTAAAATTGATTTTTTTTTTTTTTG
ATTATT 1620

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Db 171160
TATAGCTAAAATAAAATTCAAATGTATTGTAAAATTGATTTTTTTTTTTTTTG
ATTATT 171101

Qy 1621
AAGATTTAATATAAATAAACATATATGTCATATTAAATATTTA ACTAAGTGGT
CCTAATC 1680

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Db 171100
AAGATTTAATATAAATAAACATATATGTCATATTAAATATTTA ACTAAGTGGT
CCTAATC 171041

Qy 1681
TTTGAAGTAGGGGTGGGCGTTCGGGTACCTATTCGGGTTTCGGTTCGAGTCTA
TTCGGAT 1740

|||||

Db 171040
TTTGAAGTAGGGGTGGGCGTTCGGGTACCTATTCGGGTTTCGGTTCGAGTCTA
TTCGGAT 170981

Qy 1741 TTCGGATTTTTGG 1753

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Db 170980 TTCGGATTTTTGG 170968

GenCore version 5.1.9

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OM nucleic - nucleic search, using sw model

Run on: September 11, 2006, 15:07:03 ; Search time 1118.84 Seconds
(without alignments)
13695.093 Million cell updates/sec

Title: US-10-613-053A-1_COPY_3754_5000
Perfect score: 1247
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Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 18892170 seqs, 6143817638 residues

Total number of hits satisfying chosen parameters: 37784340

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

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- 14: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11B_PUBCOMB.seq:*
- 15: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11C_PUBCOMB.seq:*
- 16: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11D_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

RESULT 3

~~US-10-195-144-87/c~~

; Sequence 87, Application US/10195144

; Publication No. US20030126646A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0136

; CURRENT APPLICATION NUMBER: US/10/195,144

; CURRENT FILING DATE: 2002-10-01

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 128

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: modified_base

; LOCATION: (144241)..(144300)

; OTHER INFORMATION: a, t, c, g, other or unknown

US-10-195-144-87

Query Match 99.1%; Score 1236; DB 7; Length 271990;

Best Local Similarity 99.9%; Pred. No. 1.8e-188;

Matches 1247; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 1

GGTCAAAGATTTTAGCCCCATTCGGTTATTCTAAATTACGGTTCGGGTTTCGG
TTCGGAT 60

|||||

Db 170967
GGTCAAAGATTTTAGCCCCATTTCGGTTATTTCTAAATTACGGTTCGGGTTTCGG
TTCGGAT 170908

Qy 61
CCTTGCGGATTTCGGTTCGGGTTTCGGATAACCCGTTTAAATTATTTTCAAAT
TTAAAAT 120

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Db 170907
CCTTGCGGATTTCGGTTCGGGTTTCGGATAACCCGTTTAAATTATTTTCAAAT
TTAAAAT 170848

Qy 121
TTCATTATATATTTTAAACTTTTCGAAATTTGTAAACAAAATAATATATTACA
TATAAAT 180

|||||
Db 170847
TTCATTATATATTTTAAACTTTTCGAAATTTGTAAACAAAATAATATATTACA
TATAAAT 170788

Qy 181
TTCAATAATATGTGTCGAAGTACCAAACTTAACATGTAAATTGGTTTGATT
GGATATT 240

|||||
Db 170787
TTCAATAATATGTGTCGAAGTACCAAACTTAACATGTAAATTGGTTTGATT
GGATATT 170728

Qy 241
TGGATAGAAAATCAATCATATTTTATATATTTTGGTGTTTGGAGTATGCTTTA
ACTATT 300

|||||
Db 170727
TGGATAGAAAATCAATCATATTTTATATATTTTGGTGTTTGGAGTATGCTTTA
ACTATT 170668

Qy 301
TATACATGTACTTTTAAATGTTTTTATATATTTTCTAGTATTTTGAACAATT
AAAGTA 360

|||||
Db 170667
TATACATGTACTTTTAAATGTTTTTATATATTTTCTAGTATTTTGAACAATT
AAAGTA 170608

Qy 361
TTATATATATTTTAGATGCTTTTAAATATATATTCAATCTAAAAATAGTTAAAT
ATATAT 420

|||||

Db 170607
TTATATATATTTTAGATGCTTTTAAATATATATTCAATCTAAAAATAGTTAAAT
ATATAT 170548

Qy 421
GTATATTAATCTATTTTCGGATACATTTCGGATATCCAAAATATTTTGGTTCGGA
TCGGGTT 480

|||||

Db 170547
GTATATTAATCTATTTTCGGATACATTTCGGATATCCAAAATATTTTGGTTCGGA
TCGGGTT 170488

Qy 481
CGGTTTTGGTTCTTTAAATACCAAAAATTTAAACCTATTCGGATATTCAATTA
ATTTTCGG 540

|||||

Db 170487
CGGTTTTGGTTCTTTAAATACCAAAAATTTAAACCTATTCGGATATTCAATTA
ATTTTCGG 170428

Qy 541
TTCGGATTTGGTATTACTTTTGCAGATCGGATTCGGTTCGGTTCTTTGGATTCA
GTTTTT 600

|||||

Db 170427
TTCGGATTTGGTATTACTTTTGCAGATCGGATTCGGTTCGGTTCTTTGGATTCA
GTTTTT 170368

Qy 601
TTGTCCAGCCCTACTCTGAACAGTAGATAAAAAATAGAACCCTAAATTAATA
GGTTAGAT 660

|||||

Db 170367
TTGTCCAGCCCTACTCTGAACAGTAGATAAAAAATAGAACCCTAAATTAATA
GGTTAGAT 170308

Qy 661
TTTGGTTAGGTCTTTCTAATTAGTATGGAGATTCTCGATTCTTCTCATTGCAG
TGTGGT 720

|||||

Db 170307
TTTGGTTAGGTCTTTCTAATTAGTATGGAGATTCTCGATTCCCTTCTCATTGCAG
TGTGGT 170248

Qy 721
ATGTCCAACCTCATTGTTTATGTACATATCCAATTTAGTTTTGAGTCAAATGTTT
AGTTAC 780

Db 170247
ATGTCCAACCTCATTGTTTATGTACATATCCAATTTAGTTTTGAGTCAAATGTTT
AGTTAC 170188

Qy 781
TTAAGAGTTGAATGAAATAGGGGATGATATTGATGGCCAAGGTTCTCCCAA
GTAAAT-A 839

Db 170187
TTAAGAGTTGAATGAAATAGGGGATGATATTGATGGCCAAGGTTCTCCCAA
GTAAATAA 170128

Qy 840
ACTTTGTTTATATTTTAAGTTAGCTTATAACATCAATAAAAATGTCATTA
GGTTCAA 899

Db 170127
ACTTTGTTTATATTTTAAGTTAGCTTATAACATCAATAAAAATGTCATTA
GGTTCAA 170068

Qy 900
TAAAAATGTCATTAACCTGGTTCCTCTAATATAATTATTTAACACACCTGGCTG
TTGATAA 959

Db 170067
TAAAAATGTCATTAACCTGGTTCCTCTAATATAATTATTTAACACACCTGGCTG
TTGATAA 170008

Qy 960
ATTTTATGATCGTTTAATAATTTAGAAAGTGGATAGTCTGTAAATGGTCTTT
GATTGGT 1019

Db 170007
ATTTTATGATCGTTTAATAATTTAGAAAGTGGATAGTCTGTAAATGGTCTTT
GATTGGT 169948

Qy 1020
CGTCTTGATTTTTTAAAAGTGGACTAAACAAGAAGGCTTAGTAATAAATACTG
AACCGGAA 1079

Db 169947
CGTCTTGATTTTTTAAAAGTGGACTAAACAAGAAGGCTTAGTAATAAATACTG
AACCGGAA 169888

Qy 1080
CTCTACTGGTTTCAATAGCTCGGTTTATCAATTTCTCTCGGCTCTGGGTTTAGT
GAATCA 1139

Db 169887
CTCTACTGGTTTCAATAGCTCGGTTTATCAATTTCTCTCGGCTCTGGGTTTAGT
GAATCA 169828

Qy 1140
TGTGGCCCTGTGGGTTTAAACAAGGAACTCAATCAATCAACTGGTGACAAAT
CTGAACCG 1199

Db 169827
TGTGGCCCTGTGGGTTTAAACAAGGAACTCAATCAATCAACTGGTGACAAAT
CTGAACCG 169768

Qy 1200
GAAATTGTATAATTCAAACCTGAACCGGTTCTTGTA AAAACAAATGGAAC 1247

Db 169767
GAAATTGTATAATTCAAACCTGAACCGGTTCTTGTA AAAACAAATGGAAC
169720

RESULT 4

US-10-345-072-87/c

; Sequence 87, Application US/10345072

; Publication No. US20030237112A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; APPLICANT: LAI, FANG MING

; APPLICANT: LEFOREST, MARTIN

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN
; TITLE OF INVENTION: PLANTS
; FILE REFERENCE: 16313-0210
; CURRENT APPLICATION NUMBER: US/10/345,072
; CURRENT FILING DATE: 2003-01-16
; PRIOR APPLICATION NUMBER: PCT/US02/22217
; PRIOR FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: 60/305,026
; PRIOR FILING DATE: 2001-07-12
; PRIOR APPLICATION NUMBER: 60/305,363
; PRIOR FILING DATE: 2001-07-13
; PRIOR APPLICATION NUMBER: 60/308,736
; PRIOR FILING DATE: 2001-07-30
; NUMBER OF SEQ ID NOS: 179
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 87
; LENGTH: 271990
; TYPE: DNA
; ORGANISM: Raphanus sativum
; FEATURE:
; NAME/KEY: modified_base
; LOCATION: (144241)..(144300)
; OTHER INFORMATION: a, t, c, g, other or unknown
US-10-345-072-87

Query Match 99.1%; Score 1236; DB 7; Length 271990;
Best Local Similarity 99.9%; Pred. No. 1.8e-188;
Matches 1247; Conservative 0; Mismatches 0; Indels 1; Gaps 1;

Qy 1
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TTCGGAT 60

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Db 170967
GGTCAAAGATTTTAGCCCCATTCGGTTATTTCTAAATTACGGTTCGGGTTTCGG
TTCGGAT 170908

Qy 61
CCTTGCGGATTCGGTTCGGGTTTCGGATAACCCGTTTAAATTATTTTCAAATT
TTAAAAT 120

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Db 170907
CCTTGCGGATTCGGTTCGGGTTTCGGATAACCCGTTTAAATTATTTTCAAATT
TTAAAAT 170848

Qy 121
TTCATTATATATTTTAAACTTTTCGAAATTTGTAAACAAAATAATATATTACA
TATAAAT 180

|||||

Db 170847
TTCATTATATATTTTAAACTTTTCGAAATTTGTAAACAAAATAATATATTACA
TATAAAT 170788

Qy 181
TTCAATAATATGTGTCGAAGTACCAAACTTAACATGTAAATTGGTTTGATT
GGATATT 240

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Db 170787
TTCAATAATATGTGTCGAAGTACCAAACTTAACATGTAAATTGGTTTGATT
GGATATT 170728

Qy 241
TGGATAGAAAATCAATCATATTTTATATATTTTGGTGTTTGAGTATGCTTTA
ACTATT 300

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Db 170727
TGGATAGAAAATCAATCATATTTTATATATTTTGGTGTTTGAGTATGCTTTA
ACTATT 170668

Qy 301
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AAAGTA 360

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Db 170667
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AAAGTA 170608

Qy 361
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ATATAT 420

|||||

Db 170607
TTATATATATTTTAGATGCTTTTAAATATATATTCAATCTAAAAATAGTTAAAT
ATATAT 170548

Qy 421
GTATATTAATCTATTTTCGGATACATTCGGATATCCAAAATATTTTGGTTCGGA
TCGGGTT 480

|||||

Db 170547
GTATATTAATCTATTTTCGGATACATTTCGGATATCCAAAATATTTTGGTTCGGA
TCGGGTT 170488

Qy 481
CGGTTTTGGTTCTTTAAATACCAAAAATTTAAACCTATTTCGGATATTCAATTA
ATTTCGG 540

|||||

Db 170487
CGGTTTTGGTTCTTTAAATACCAAAAATTTAAACCTATTTCGGATATTCAATTA
ATTTCGG 170428

Qy 541
TTCGGATTTGGTATTACTTTTGCAGATCGGATTCGGTTCGGTTCTTTGGATTCA
GTTTTT 600

|||||

Db 170427
TTCGGATTTGGTATTACTTTTGCAGATCGGATTCGGTTCGGTTCTTTGGATTCA
GTTTTT 170368

Qy 601
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GGTTAGAT 660

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Db 170367
TTGTCCAGCCCTACTCTGAACAGTAGATAAAAAATAGAACCCTAAATTAATA
GGTTAGAT 170308

Qy 661
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TGTGGT 720

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Db 170307
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TGTGGT 170248

Qy 721
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AGTTAC 780

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Db 170247
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Qy 781
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Db 170187
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GTAAATAA 170128

Qy 840
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GGTTCAA 899

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Db 170127
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GGTTCAA 170068

Qy 900
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TTGATAA 959

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Db 170067
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TTGATAA 170008

Qy 960
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GATTGGT 1019

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Db 170007
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GATTGGT 169948

Qy 1020
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AACCGGAA 1079

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Db 169947
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Qy 1080
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GAATCA 1139

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Db 169887

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Qy 1140

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CTGAACCG 1199

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Db 169827

TGTGGCCCTGTGGGTTTAAACAAGGAACTCAATCAATCAACTGGTGACAAAT
CTGAACCG 169768

Qy 1200

GAAATTGTATAATTCAAACCTGAACCGGTTCTTGTAACAAATGGAAC 1247

|||||

Db 169767

GAAATTGTATAATTCAAACCTGAACCGGTTCTTGTAACAAATGGAAC
169720

GenCore version 5.1.9
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OM nucleic - nucleic search, using sw model

Run on: September 11, 2006, 15:07:03 ; Search time 1794.46 Seconds
(without alignments)
13695.093 Million cell updates/sec

Title: US-10-613-053A-1_COPY_5001_7000
Perfect score: 2000
Sequence: 1 ccgtttgtactttatctctc.....taatattaatggggctctag 2000

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 18892170 seqs, 6143817638 residues

Total number of hits satisfying chosen parameters: 37784340

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_NA_Main:*

- 1: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US07_PUBCOMB.seq:*
- 2: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US08_PUBCOMB.seq:*
- 3: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09A_PUBCOMB.seq:*
- 4: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
- 5: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09C_PUBCOMB.seq:*
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- 7: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
- 8: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10C_PUBCOMB.seq:*
- 9: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10D_PUBCOMB.seq:*
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- 11: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
- 12: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10G_PUBCOMB.seq:*
- 13: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11A_PUBCOMB.seq:*
- 14: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11B_PUBCOMB.seq:*
- 15: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11C_PUBCOMB.seq:*
- 16: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11D_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

RESULT 3

US-10-195-144-87/c

; Sequence 87, Application US/10195144

; Publication No. US20030126646A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0136

; CURRENT APPLICATION NUMBER: US/10/195,144

; CURRENT FILING DATE: 2002-10-01

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 128

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: modified_base

; LOCATION: (144241)..(144300)

; OTHER INFORMATION: a, t, c, g, other or unknown

US-10-195-144-87

Query Match 100.0%; Score 2000; DB 7; Length 271990;

Best Local Similarity 100.0%; Pred. No. 0;

Matches 2000; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1

CCGTTTGTTACTTTATCTCTCGTTTATTTTCTCAGTCACGAGTTTTTTTAGAGA

TCGACG 60

|||||

Db 169719
CCGTTTGTACTTTATCTCTCGTTTATTTTCTCAGTCACGAGTTTTTTTTTAGAGA
TCGACG 169660

Qy 61
AAGAACAAAATTTAGGCGAAACAAAAATAAAATGTTGGCTAGGGTTTGTGGA
TTCAAGTG 120

|||||

Db 169659
AAGAACAAAATTTAGGCGAAACAAAAATAAAATGTTGGCTAGGGTTTGTGGA
TTCAAGTG 169600

Qy 121
TTCTTCTTCTCCTGCTGAGTCTGCGGCTAGATTGTTCTGTACGAGATCGATTCTG
GATAC 180

|||||

Db 169599
TTCTTCTTCTCCTGCTGAGTCTGCGGCTAGATTGTTCTGTACGAGATCGATTCTG
GATAC 169540

Qy 181
TCTGGCCAAGGCAAGCGGAGAGAGTTGCGAAGCAGGTTTTGGAGGAGAGAG
TTTGAAGCT 240

|||||

Db 169539
TCTGGCCAAGGCAAGCGGAGAGAGTTGCGAAGCAGGTTTTGGAGGAGAGAG
TTTGAAGCT 169480

Qy 241
GCAAAGTGGGTTTTCATGAAATCAAAGGTTTAGAGGATGCGATTGATTTGTTC
AGTGACAT 300

|||||

Db 169479
GCAAAGTGGGTTTTCATGAAATCAAAGGTTTAGAGGATGCGATTGATTTGTTC
AGTGACAT 169420

Qy 301
GCTTCGATCTCGTCCTTTACCTTCTGTGGTTGATTTCTGTAAATTGATGGGTGT
GGTGGT 360

|||||

Db 169419
GCTTCGATCTCGTCCTTTACCTTCTGTGGTTGATTTCTGTAAATTGATGGGTGT
GGTGGT 169360

Qy 361
GAGAATGGAACGCCCCGGATCTTGTGATTTCTCTCTATCAGAAGATGGAAAGG
AAACAGAT 420

|||||

Db 169359
GAGAATGGAACGCCCCGGATCTTGTGATTTCTCTCTATCAGAAGATGGAAAGG
AAACAGAT 169300

Qy 421
TCGATGTGATATATACAGCTTCAATATTCTGATAAAATGTTTCTGCAGCTGCT
CTAAGCT 480

|||||

Db 169299
TCGATGTGATATATACAGCTTCAATATTCTGATAAAATGTTTCTGCAGCTGCT
CTAAGCT 169240

Qy 481
CCCCTTTGCTTTGTCTACATTTGGTAAGATCACCAAGCTTGGACTCCACCCTG
ATGTTGT 540

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Db 169239
CCCCTTTGCTTTGTCTACATTTGGTAAGATCACCAAGCTTGGACTCCACCCTG
ATGTTGT 169180

Qy 541
TACCTTCACCACCCTGCTCCATGGATTATGTGTGGAAGATAGGGTTTCTGAAG
CCTTGGA 600

|||||

Db 169179
TACCTTCACCACCCTGCTCCATGGATTATGTGTGGAAGATAGGGTTTCTGAAG
CCTTGGA 169120

Qy 601
TTTTTTTCATCAAATGTTTGAAACGACATGTAGGCCCAATGTCGTAACCTTCA
CCTTT 660

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Db 169119
TTTTTTTCATCAAATGTTTGAAACGACATGTAGGCCCAATGTCGTAACCTTCA
CCTTT 169060

Qy 661
GATGAACGGTCTTTGCCGCGAGGGTAGAATTGTCGAAGCCGTAGCTCTGCTT
GATCGGAT 720

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Db 169059

GATGAACGGTCTTTGCCGCGAGGGTAGAATTGTCGAAGCCGTAGCTCTGCTT
GATCGGAT 169000

Qy 721

GATGGAAGATGGTCTCCAGCCTACCCAGATTACTTATGGAACAATCGTAGAT
GGGATGTG 780

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Db 168999

GATGGAAGATGGTCTCCAGCCTACCCAGATTACTTATGGAACAATCGTAGAT
GGGATGTG 168940

Qy 781

TAAGAAGGGAGATACTGTGTCTGCACTGAATCTGCTGAGGAAGATGGAGGAG
GTGAGCCA 840

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Db 168939

TAAGAAGGGAGATACTGTGTCTGCACTGAATCTGCTGAGGAAGATGGAGGAG
GTGAGCCA 168880

Qy 841

CATCATACCCAATGTTGTAATCTATAGTGCAATCATTGATAGCCTTTGTAAAG
ACGGACG 900

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Db 168879

CATCATACCCAATGTTGTAATCTATAGTGCAATCATTGATAGCCTTTGTAAAG
ACGGACG 168820

Qy 901

TCATAGCGATGCACAAAATCTTTTCACTGAAATGCAAGAGAAAGGAATCTTT
CCCGATTT 960

|||||

Db 168819

TCATAGCGATGCACAAAATCTTTTCACTGAAATGCAAGAGAAAGGAATCTTT
CCCGATTT 168760

Qy 961

ATTACCTACAACAGTATGATAGTTGGTTTTTGTAGCTCTGGTAGATGGAGCG
ACGCGGA 1020

|||||

Db 168759

ATTACCTACAACAGTATGATAGTTGGTTTTTGTAGCTCTGGTAGATGGAGCG
ACGCGGA 168700

Qy 1021
GCAGTTGTTGCAAGAAATGTTAGAAAGGAAGATCAGCCCTGATGTTGTAAC
TATAATGC 1080

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Db 168699
GCAGTTGTTGCAAGAAATGTTAGAAAGGAAGATCAGCCCTGATGTTGTAAC
TATAATGC 168640

Qy 1081
TTTGATCAATGCATTTGTCAAGGAAGGCAAGTTCTTTGAGGCTGAAGAATTAT
ACGATGA 1140

|||||

Db 168639
TTTGATCAATGCATTTGTCAAGGAAGGCAAGTTCTTTGAGGCTGAAGAATTAT
ACGATGA 168580

Qy 1141
GATGCTTCCAAGGGGTATAATCCCTAATAACAATCACATATAGTTCAATGATCG
ATGGATT 1200

|||||

Db 168579
GATGCTTCCAAGGGGTATAATCCCTAATAACAATCACATATAGTTCAATGATCG
ATGGATT 168520

Qy 1201
TTGCAAACAGAATCGTCTTGATGCTGCTGAGCACATGTTTTATTTGATGGCTA
CCAAGGG 1260

|||||

Db 168519
TTGCAAACAGAATCGTCTTGATGCTGCTGAGCACATGTTTTATTTGATGGCTA
CCAAGGG 168460

Qy 1261
CTGCTCTCCCAACCTAATCACTTTCAATACTCTCATAGACGGATATTGTGGGG
CTAAGAG 1320

|||||

Db 168459
CTGCTCTCCCAACCTAATCACTTTCAATACTCTCATAGACGGATATTGTGGGG
CTAAGAG 168400

Qy 1321
GATAGATGATGGAATGGAACCTTCTCCATGAGATGACTGAAACAGGATTAGTT
GCTGACAC 1380

|||||

Db 168399
GATAGATGATGGAATGGAACCTTCTCCATGAGATGACTGAAACAGGATTAGTT
GCTGACAC 168340

Qy 1381
AACTACTTACAACACTCTTATTCACGGGTTCTATCTGGTGGGCGATCTTAATG
CTGCTCT 1440

|||||

Db 168339
AACTACTTACAACACTCTTATTCACGGGTTCTATCTGGTGGGCGATCTTAATG
CTGCTCT 168280

Qy 1441
AGACCTTTTACAAGAGATGATCTCTAGTGGTTTGTGCCCTGATATCGTTACTT
GTGACAC 1500

|||||

Db 168279
AGACCTTTTACAAGAGATGATCTCTAGTGGTTTGTGCCCTGATATCGTTACTT
GTGACAC 168220

Qy 1501
TTTGCTGGATGGTCTCTGCGATAATGGGAACTAAAAGATGCATTGGAAATG
TTTAAGGT 1560

|||||

Db 168219
TTTGCTGGATGGTCTCTGCGATAATGGGAACTAAAAGATGCATTGGAAATG
TTTAAGGT 168160

Qy 1561
TATGCAGAAGAGTAAGAAGGATCTTGATGCTAGTCACCCCTTCAATGGTGTG
GAACCTGA 1620

|||||

Db 168159
TATGCAGAAGAGTAAGAAGGATCTTGATGCTAGTCACCCCTTCAATGGTGTG
GAACCTGA 168100

Qy 1621
TGTTCAAACCTTACAATATATTGATCAGCGGCTTGATCAATGAAGGGAAGTTTT
TAGAGGC 1680

|||||

Db 168099
TGTTCAAACCTTACAATATATTGATCAGCGGCTTGATCAATGAAGGGAAGTTTT
TAGAGGC 168040

Qy 1681
CGAGGAATTATACGAGGAGATGCCCCACAGGGGTATAGTCCCAGATACTATC
ACCTATAG 1740

|||||
Db 168039
CGAGGAATTATACGAGGAGATGCCCCACAGGGGTATAGTCCCAGATACTATC
ACCTATAG 167980

Qy 1741
CTCAATGATCGATGGATTATGCAAGCAGAGCCGCCTAGATGAGGCTACACAA
ATGTTTGA 1800

|||||
Db 167979
CTCAATGATCGATGGATTATGCAAGCAGAGCCGCCTAGATGAGGCTACACAA
ATGTTTGA 167920

Qy 1801
TTCGATGGGTAGCAAGAGCTTCTCTCCAAACGTAGTGACCTTTACTACACTCA
TTAATGG 1860

|||||
Db 167919
TTCGATGGGTAGCAAGAGCTTCTCTCCAAACGTAGTGACCTTTACTACACTCA
TTAATGG 167860

Qy 1861
CTACTGTAAGGCAGGAAGGGTTGATGATGGGCTGGAGCTTTTCTGCGAGATG
GGTCGAAG 1920

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Db 167859
CTACTGTAAGGCAGGAAGGGTTGATGATGGGCTGGAGCTTTTCTGCGAGATG
GGTCGAAG 167800

Qy 1921
AGGGATAGTTGCTAACGCAATTACTTACATCACTTTGATTTGTGGTTTTTCGTA
AAGTGGG 1980

|||||
Db 167799
AGGGATAGTTGCTAACGCAATTACTTACATCACTTTGATTTGTGGTTTTTCGTA
AAGTGGG 167740

Qy 1981 TAATATTAATGGGGCTCTAG 2000
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Db 167739 TAATATTAATGGGGCTCTAG 167720

RESULT 4

US-10-345-072-87/c

; Sequence 87, Application US/10345072

; Publication No. US20030237112A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; APPLICANT: LAI, FANG MING

; APPLICANT: LEFOREST, MARTIN

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0210

; CURRENT APPLICATION NUMBER: US/10/345,072

; CURRENT FILING DATE: 2003-01-16

; PRIOR APPLICATION NUMBER: PCT/US02/22217

; PRIOR FILING DATE: 2002-07-12

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 179

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: modified_base

; LOCATION: (144241)..(144300)

; OTHER INFORMATION: a, t, c, g, other or unknown

US-10-345-072-87

Query Match 100.0%; Score 2000; DB 7; Length 271990;

Best Local Similarity 100.0%; Pred. No. 0;

Matches 2000; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1

CCGTTTGTACTTTATCTCTCGTTTATTTTCTCAGTCACGAGTTTTTTTAGAGA
TCGACG 60

|||||

Db 169719
CCGTTTGTACTTTATCTCTCGTTTATTTTCTCAGTCACGAGTTTTTTTTTAGAGA
TCGACG 169660

Qy 61
AAGAACAAAATTTAGGCGAAACAAAAATAAAATGTTGGCTAGGGTTTGTGGA
TTCAAGTG 120

|||||

Db 169659
AAGAACAAAATTTAGGCGAAACAAAAATAAAATGTTGGCTAGGGTTTGTGGA
TTCAAGTG 169600

Qy 121
TTCTTCTTCTCCTGCTGAGTCTGCGGCTAGATTGTTCTGTACGAGATCGATTCTG
TGATAC 180

|||||

Db 169599
TTCTTCTTCTCCTGCTGAGTCTGCGGCTAGATTGTTCTGTACGAGATCGATTCTG
TGATAC 169540

Qy 181
TCTGGCCAAGGCAAGCGGAGAGAGTTGCGAAGCAGGTTTTGGAGGAGAGAG
TTTGAAGCT 240

|||||

Db 169539
TCTGGCCAAGGCAAGCGGAGAGAGTTGCGAAGCAGGTTTTGGAGGAGAGAG
TTTGAAGCT 169480

Qy 241
GCAAAGTGGGTTTTCATGAAATCAAAGGTTTAGAGGATGCGATTGATTTGTTC
AGTGACAT 300

|||||

Db 169479
GCAAAGTGGGTTTTCATGAAATCAAAGGTTTAGAGGATGCGATTGATTTGTTC
AGTGACAT 169420

Qy 301
GCTTCGATCTCGTCCTTTACCTTCTGTGGTTGATTTCTGTAAATTGATGGGTGT
GGTGGT 360

|||||

Db 169419
GCTTCGATCTCGTCCTTTACCTTCTGTGGTTGATTTCTGTAAATTGATGGGTGT
GGTGGT 169360

Qy 361
GAGAATGGAACGCCCGGATCTTGTGATTTCTCTCTATCAGAAGATGGAAAGG
AAACAGAT 420

|||||

Db 169359
GAGAATGGAACGCCCGGATCTTGTGATTTCTCTCTATCAGAAGATGGAAAGG
AAACAGAT 169300

Qy 421
TCGATGTGATATATACAGCTTCAATATTCTGATAAAATGTTTCTGCAGCTGCT
CTAAGCT 480

|||||

Db 169299
TCGATGTGATATATACAGCTTCAATATTCTGATAAAATGTTTCTGCAGCTGCT
CTAAGCT 169240

Qy 481
CCCCTTTGCTTTGTCTACATTTGGTAAGATCACCAAGCTTGGACTCCACCCTG
ATGTTGT 540

|||||

Db 169239
CCCCTTTGCTTTGTCTACATTTGGTAAGATCACCAAGCTTGGACTCCACCCTG
ATGTTGT 169180

Qy 541
TACCTTCACCACCCTGCTCCATGGATTATGTGTGGAAGATAGGGTTTCTGAAG
CCTTGGA 600

|||||

Db 169179
TACCTTCACCACCCTGCTCCATGGATTATGTGTGGAAGATAGGGTTTCTGAAG
CCTTGGA 169120

Qy 601
TTTTTTTCATCAAATGTTTGAAACGACATGTAGGCCCAATGTCGTAACCTTCA
CCTTT 660

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Db 169119
TTTTTTTCATCAAATGTTTGAAACGACATGTAGGCCCAATGTCGTAACCTTCA
CCTTT 169060

Qy 661
GATGAACGGTCTTTGCCGCGAGGGTAGAATTGTCGAAGCCGTAGCTCTGCTT
GATCGGAT 720

|||||

Db 169059

GATGAACGGTCTTTGCCGCGAGGGTAGAATTGTCGAAGCCGTAGCTCTGCTT
GATCGGAT 169000

Qy 721

GATGGAAGATGGTCTCCAGCCTACCCAGATTACTTATGGAACAATCGTAGAT
GGGATGTG 780

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Db 168999

GATGGAAGATGGTCTCCAGCCTACCCAGATTACTTATGGAACAATCGTAGAT
GGGATGTG 168940

Qy 781

TAAGAAGGGAGATACTGTGTCTGCACTGAATCTGCTGAGGAAGATGGAGGAG
GTGAGCCA 840

|||||

Db 168939

TAAGAAGGGAGATACTGTGTCTGCACTGAATCTGCTGAGGAAGATGGAGGAG
GTGAGCCA 168880

Qy 841

CATCATACCCAATGTTGTAATCTATAGTGCAATCATTGATAGCCTTTGTAAAG
ACGGACG 900

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Db 168879

CATCATACCCAATGTTGTAATCTATAGTGCAATCATTGATAGCCTTTGTAAAG
ACGGACG 168820

Qy 901

TCATAGCGATGCACAAAATCTTTTCACTGAAATGCAAGAGAAAGGAATCTTT
CCCGATTT 960

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Db 168819

TCATAGCGATGCACAAAATCTTTTCACTGAAATGCAAGAGAAAGGAATCTTT
CCCGATTT 168760

Qy 961

ATTACCTACAACAGTATGATAGTTGGTTTTTGTAGCTCTGGTAGATGGAGCG
ACGCGGA 1020

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Db 168759

ATTACCTACAACAGTATGATAGTTGGTTTTTGTAGCTCTGGTAGATGGAGCG
ACGCGGA 168700

Qy 1021
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TATAATGC 1080

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Db 168699
GCAGTTGTTGCAAGAAATGTTAGAAAGGAAGATCAGCCCTGATGTTGTAAC
TATAATGC 168640

Qy 1081
TTTGATCAATGCATTTGTCAAGGAAGGCAAGTTCTTTGAGGCTGAAGAATTAT
ACGATGA 1140

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Db 168639
TTTGATCAATGCATTTGTCAAGGAAGGCAAGTTCTTTGAGGCTGAAGAATTAT
ACGATGA 168580

Qy 1141
GATGCTTCCAAGGGGTATAATCCCTAATAACAATCACATATAGTTCAATGATCG
ATGGATT 1200

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Db 168579
GATGCTTCCAAGGGGTATAATCCCTAATAACAATCACATATAGTTCAATGATCG
ATGGATT 168520

Qy 1201
TTGCAAACAGAATCGTCTTGATGCTGCTGAGCACATGTTTTATTTGATGGCTA
CCAAGGG 1260

|||||

Db 168519
TTGCAAACAGAATCGTCTTGATGCTGCTGAGCACATGTTTTATTTGATGGCTA
CCAAGGG 168460

Qy 1261
CTGCTCTCCAACCTAATCACTTTCAATACTCTCATAGACGGATATTGTGGGG
CTAAGAG 1320

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Db 168459
CTGCTCTCCAACCTAATCACTTTCAATACTCTCATAGACGGATATTGTGGGG
CTAAGAG 168400

Qy 1321
GATAGATGATGGAATGGAAGTTCTCCATGAGATGACTGAAACAGGATTAGTT
GCTGACAC 1380

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Db 168399
GATAGATGATGGAATGGAAGTTCTCCATGAGATGACTGAAACAGGATTAGTT
GCTGACAC 168340

Qy 1381
AACTACTTACAACACTCTTATTCACGGGTTCTATCTGGTGGGCGATCTTAATG
CTGCTCT 1440

|||||
Db 168339
AACTACTTACAACACTCTTATTCACGGGTTCTATCTGGTGGGCGATCTTAATG
CTGCTCT 168280

Qy 1441
AGACCTTTTACAAGAGATGATCTCTAGTGGTTTGTGCCCTGATATCGTTACTT
GTGACAC 1500

|||||
Db 168279
AGACCTTTTACAAGAGATGATCTCTAGTGGTTTGTGCCCTGATATCGTTACTT
GTGACAC 168220

Qy 1501
TTTGCTGGATGGTCTCTGCGATAATGGGAACTAAAAGATGCATTGGAAATG
TTTAAGGT 1560

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Db 168219
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TTTAAGGT 168160

Qy 1561
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GAACCTGA 1620

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Db 168159
TATGCAGAAGAGTAAGAAGGATCTTGATGCTAGTCACCCCTTCAATGGTGTG
GAACCTGA 168100

Qy 1621
TGTTCAAACCTTACAATATATTGATCAGCGGCTTGATCAATGAAGGGAAGTTTT
TAGAGGC 1680

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Db 168099
TGTTCAAACCTTACAATATATTGATCAGCGGCTTGATCAATGAAGGGAAGTTTT
TAGAGGC 168040

Qy 1681

CGAGGAATTATACGAGGAGATGCCCCACAGGGGTATAGTCCCAGATACTATC
ACCTATAG 1740

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Db 168039

CGAGGAATTATACGAGGAGATGCCCCACAGGGGTATAGTCCCAGATACTATC
ACCTATAG 167980

Qy 1741

CTCAATGATCGATGGATTATGCAAGCAGAGCCGCCTAGATGAGGCTACACAA
ATGTTTGA 1800

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Db 167979

CTCAATGATCGATGGATTATGCAAGCAGAGCCGCCTAGATGAGGCTACACAA
ATGTTTGA 167920

Qy 1801

TTCGATGGGTAGCAAGAGCTTCTCTCCAAACGTAGTGACCTTTACTACACTCA
TTAATGG 1860

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Db 167919

TTCGATGGGTAGCAAGAGCTTCTCTCCAAACGTAGTGACCTTTACTACACTCA
TTAATGG 167860

Qy 1861

CTACTGTAAGGCAGGAAGGGTTGATGATGGGCTGGAGCTTTTCTGCGAGATG
GGTCGAAG 1920

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Db 167859

CTACTGTAAGGCAGGAAGGGTTGATGATGGGCTGGAGCTTTTCTGCGAGATG
GGTCGAAG 167800

Qy 1921

AGGGATAGTTGCTAACGCAATTACTTACATCACTTTGATTTGTGGTTTTTCGTA
AAGTGGG 1980

|||||

Db 167799

AGGGATAGTTGCTAACGCAATTACTTACATCACTTTGATTTGTGGTTTTTCGTA
AAGTGGG 167740

Qy 1981 TAATATTAATGGGGCTCTAG 2000

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Db 167739 TAATATTAATGGGGCTCTAG 167720

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OM nucleic - nucleic search, using sw model

Run on: September 11, 2006, 15:07:03 ; Search time 1393.4 Seconds
(without alignments)
13695.093 Million cell updates/sec

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Perfect score: 1553
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Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 18892170 seqs, 6143817638 residues

Total number of hits satisfying chosen parameters: 37784340

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

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- 15: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11C_PUBCOMB.seq:*
- 16: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11D_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

RESULT 3

US-10-195-144-87/c

; Sequence 87, Application US/10195144

; Publication No. ~~US20030126646A1~~

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0136

; CURRENT APPLICATION NUMBER: US/10/195,144

; CURRENT FILING DATE: 2002-10-01

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 128

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 87

; LENGTH: 271990

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: modified_base

; LOCATION: (144241)..(144300)

; OTHER INFORMATION: a, t, c, g, other or unknown

US-10-195-144-87

Query Match 99.9%; Score 1551.4; DB 7; Length 271990;

Best Local Similarity 99.9%; Pred. No. 0;

Matches 1552; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1

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CGCAATA 60

|||||

Db 167719
ACATTTTCCAGGAGATGATTTCAAGTGGTGTGTATCCTGATACCATTACCATC
CGCAATA 167660

Qy 61
TGCTGACTGGTTTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCT
TGAGAAAC 120

|||||

Db 167659
TGCTGACTGGTTTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCT
TGAGAAAC 167600

Qy 121
TGCAGATGAGTATGGTATGTAAGTTTCTGTTCAGTCTATGTATTTTTTATATAA
ACAAGA 180

|||||

Db 167599
TGCAGATGAGTATGGTATGTAAGTTTCTGTTCAGTCTATGTATTTTTTATATAA
ACAAGA 167540

Qy 181
ATGTATACATTCTTTTGTGTGTAGCTTCAGATTGATGATACACGTTCTGGAAT
TAACCAT 240

|||||

Db 167539
ATGTATACATTCTTTTGTGTGTAGCTTCAGATTGATGATACACGTTCTGGAAT
TAACCAT 167480

Qy 241
TGGTTTGGTTTTGCATTGTAGGATCTATCATTGGGGGATGAATGATCAAAGA
TTTTCTT 300

|||||

Db 167479
TGGTTTGGTTTTGCATTGTAGGATCTATCATTGGGGGATGAATGATCAAAGA
TTTTCTT 167420

Qy 301
CTGTTTGCGCAGCAGAGCTTCAATGTCATTTGTTTCTGCTGCTGCATGTATAC
CCTACT 360

|||||

Db 167419
CTGTTTGCGCAGCAGAGCTTCAATGTCATTTGTTTCTGCTGCTGCATGTATAC
CCTACT 167360

Qy 361
AATGTTTGATCAAATCGTTGAATAGAGTGATCATAGTGAAAAATTGTGTGGTT
AGTAAGT 420

|||||
Db 167359
AATGTTTGATCAAATCGTTGAATAGAGTGATCATAGTGAAAAATTGTGTGGTT
AGTAAGT 167300

Qy 421
TATTTTGCTGCTATTCTAATGACAGCCTTTTATGCGTCTATTGTCTGGGCTTAA
TAAATT 480

|||||
Db 167299
TATTTTGCTGCTATTCTAATGACAGCCTTTTATGCGTCTATTGTCTGGGCTTAA
TAAATT 167240

Qy 481
TGACCATTTCGAATTAAATTCCATACACTTGTTTCACGCAAGATTATTGGTCT
GAACTAA 540

|||||
Db 167239
TGACCATTTCGAATTAAATTCCATACACTTGTTTCACGCAAGATTATTGGTCT
GAACTAA 167180

Qy 541
AGAGGCACACCTTCCAGAAGATTTTCAGGTGTTAAAAGATGTTTAGGTGTCTG
CCCGTTCT 600

|||||
Db 167179
AGAGGCACACCTTCCAGAAGATTTTCAGGTGTTAAAAGATGTTTAGGTGTCTG
CCCGTTCT 167120

Qy 601
GTAGCTGTCACCATGGTTATCGTCAAGCTCGGTCTTCATGAGAGCTGATAGCT
GTGATGC 660

|||||
Db 167119
GTAGCTGTCACCATGGTTATCGTCAAGCTCGGTCTTCATGAGAGCTGATAGCT
GTGATGC 167060

Qy 661
CATCTTCCTCCTCTTCTTCATATTGGCTCTGTCCTGCCTTGTCTGCTCCCATGT
GGGTTC 720

|||||

Db 167059
CATCTTCCTCCTCTTCTTCATATTGGCTCTGTCCTGCCTTGTCTGCTCCCATGT
GGGTTC 167000

Qy 721
AGGAGGAGATCATGTTCTTTTAATCTTGGTGGAAATGTTGTTGTCGCTTATGC
TTCTCTG 780

|||||

Db 166999
AGGAGGAGATCATGTTCTTTTAATCTTGGTGGAAATGTTGTTGTCGCTTATGC
TTCTCTG 166940

Qy 781
GTTTCGCCTCTTGACTTGCTTAGCTTCATTCTTTATCTCCAAATTGCTATGAAAT
CAATTT 840

|||||

Db 166939
GTTTCGCCTCTTGACTTGCTTAGCTTCATTCTTTATCTCCAAATTGCTATGAAAT
CAATTT 166880

Qy 841
ACCATAAGTAGAATAAACTTGCAGATTCATTCTATTATTGCTTAAGCTTTTGT
TAATCAA 900

|||||

Db 166879
ACCATACGTAGAATAAACTTGCAGATTCATTCTATTATTGCTTAAGCTTTTGT
TAATCAA 166820

Qy 901
CAAAGAAACCAGAGACGAGAAATACAACTCTATAAGCTTCTCTTTTTTCTTT
CTTGATA 960

|||||

Db 166819
CAAAGAAACCAGAGACGAGAAATACAACTCTATAAGCTTCTCTTTTTTCTTT
CTTGATA 166760

Qy 961
GTAAAACCGGTTAGAGAGTAGAGATTGATCATATGAACTAAAAATCGATACT
AAAACGGT 1020

|||||

Db 166759
GTAAAACCGGTTAGAGAGTAGAGATTGATCATATGAACTAAAAATCGATACT
AAAACGGT 166700

Qy 1021
TTGGCTCCGACTTATAAACCGGAACCCACCGTTTTGCATCTCTCTCTCAAAC
ATCACAC 1080

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Db 166699
TTGGCTCCGACTTATAAACCGGAACCCACCGTTTTGCATCTCTCTCTCAAAC
ATCACAC 166640

Qy 1081
AATGTCCAAGATGAAGAAGTATTTGTGTTGTCATCTCTCTGGGTGAGGAGAT
GCAAATGT 1140

|||||

Db 166639
AATGTCCAAGATGAAGAAGTATTTGTGTTGTCATCTCTCTGGGTGAGGAGAT
GCAAATGT 166580

Qy 1141
TATATTCTAATTGTTTTTCAGTGCTTGGTCTAACTTTTTTAAGAGATTACTCCCA
GTGGTT 1200

|||||

Db 166579
TATATTCTAATTGTTTTTCAGTGCTTGGTCTAACTTTTTTAAGAGATTACTCCCA
GTGGTT 166520

Qy 1201
GGATCAAAGAAAGAGTCAACATTGCATTGTGTAAGGTGACGAAAACCTGAGTT
AAAGTAAG 1260

|||||

Db 166519
GGATCAAAGAAAGAGTCAACATTGCATTGTGTAAGGTGACGAAAACCTGAGTT
AAAGTAAG 166460

Qy 1261
TGAGAACAATACTTCAATGCTTTTCTTGTGACAACCTGTGTAATCATCGCATT
TGAATAT 1320

|||||

Db 166459
TGAGAACAATACTTCAATGCTTTTCTTGTGACAACCTGTGTAATCATCGCATT
TGAATAT 166400

Qy 1321
ATATGTATATGATGCTTATGATGAAGCTATGAGAATAGGCAAATAGGGTCTG
TGTTATTT 1380

|||||

Db 166399
ATATGTATATGATGCTTATGATGAAGCTATGAGAATAGGCAAATAGGGTCTG
TGTTATTT 166340

Qy 1381
CCCTGCGATTCTAGATTCTGATTTGTTTTTCCTTCTTAATATTTAGATTAGGTG
GTCTTG 1440

|||||
Db 166339
CCCTGCGATTCTAGATTCTGATTTGTTTTTCCTTCTTAATATTTAGATTAGGTG
GTCTTG 166280

Qy 1441
CTTATCCTGTTTTAGTATTAGAGTCGGAGTTTTGGGGATGAATCATCCCGGAT
GATATAT 1500

|||||
Db 166279
CTTATCCTGTTTTAGTATTAGAGTCGGAGTTTTGGGGATGAATCATCCCGGAT
GATATAT 166220

Qy 1501
ACAATTGTGTATTTTATGAATTCAGTTTTTAGTGGATAATGAACACGTTAAC
1553

|||||
Db 166219
ACAATTGTGTATTTTATGAATTCAGTTTTTAGTGGATAATGAACACGTTAAC
166167

RESULT 4

US-10-345-072-87/c

; Sequence 87, Application US/10345072

; Publication No. US20030237112A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; APPLICANT: LAI, FANG MING

; APPLICANT: LEFOREST, MARTIN

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0210

; CURRENT APPLICATION NUMBER: US/10/345,072
; CURRENT FILING DATE: 2003-01-16
; PRIOR APPLICATION NUMBER: PCT/US02/22217
; PRIOR FILING DATE: 2002-07-12
; PRIOR APPLICATION NUMBER: 60/305,026
; PRIOR FILING DATE: 2001-07-12
; PRIOR APPLICATION NUMBER: 60/305,363
; PRIOR FILING DATE: 2001-07-13
; PRIOR APPLICATION NUMBER: 60/308,736
; PRIOR FILING DATE: 2001-07-30
; NUMBER OF SEQ ID NOS: 179
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 87
; LENGTH: 271990
; TYPE: DNA
; ORGANISM: Raphanus sativum
; FEATURE:
; NAME/KEY: modified_base
; LOCATION: (144241)..(144300)
; OTHER INFORMATION: a, t, c, g, other or unknown
US-10-345-072-87

Query Match 99.9%; Score 1551.4; DB 7; Length 271990;
Best Local Similarity 99.9%; Pred. No. 0;
Matches 1552; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1
ACATTTTCCAGGAGATGATTTCAAGTGGTGTGTATCCTGATACCATTACCATC
CGCAATA 60

Db 167719
ACATTTTCCAGGAGATGATTTCAAGTGGTGTGTATCCTGATACCATTACCATC
CGCAATA 167660

Qy 61
TGCTGACTGGTTTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCT
TGAGAAAC 120

Db 167659
TGCTGACTGGTTTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCT
TGAGAAAC 167600

Qy 121
TGCAGATGAGTATGGTATGTAAGTTTCTGTTCAGTCTATGTATTTTTTATATAA
ACAAGA 180

Db 167599
TGCAGATGAGTATGGTATGTAAGTTTCTGTTCAGTCTATGTATTTTTTATATAA
ACAAGA 167540

Qy 181
ATGTATACATTCTTTTGTGTGTAGCTTCAGATTGATGATACACGTTCTGGAAT
TAACCAT 240

Db 167539
ATGTATACATTCTTTTGTGTGTAGCTTCAGATTGATGATACACGTTCTGGAAT
TAACCAT 167480

Qy 241
TGGTTTGGTTTTCGATTGTAGGATCTATCATTGGGGGATGAATGATCAAAGA
TTTTCTT 300

Db 167479
TGGTTTGGTTTTCGATTGTAGGATCTATCATTGGGGGATGAATGATCAAAGA
TTTTCTT 167420

Qy 301
CTGTTTGCAGCAGAGCTTCAATGTCATTTGTTTCTGCTGCTGCATGTATAC
CCTACT 360

Db 167419
CTGTTTGCAGCAGAGCTTCAATGTCATTTGTTTCTGCTGCTGCATGTATAC
CCTACT 167360

Qy 361
AATGTTTGATCAAATCGTTGAATAGAGTGATCATAGTGAAAAATTGTGTGGTT
AGTAAGT 420

Db 167359
AATGTTTGATCAAATCGTTGAATAGAGTGATCATAGTGAAAAATTGTGTGGTT
AGTAAGT 167300

Qy 421
TATTTTGCTGCTATTCTAATGACAGCCTTTTATGCGTCTATTGTCTGGGCTTAA
TAAATT 480

Db 167299
TATTTTGCTGCTATTCTAATGACAGCCTTTTATGCGTCTATTGTCTGGGCTTAA
TAAATT 167240

Qy 481
TGACCATTTCCTCAATTAAATTCCATACACTTGTTTCACGCAAGATTATTGGTCT
GAACTAA 540

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Db 167239
TGACCATTTCCTCAATTAAATTCCATACACTTGTTTCACGCAAGATTATTGGTCT
GAACTAA 167180

Qy 541
AGAGGCACACCTTCCAGAAGATTTCAGGTGTTAAAAGATGTTTAGGTGTCTG
CCCGTTCT 600

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Db 167179
AGAGGCACACCTTCCAGAAGATTTCAGGTGTTAAAAGATGTTTAGGTGTCTG
CCCGTTCT 167120

Qy 601
GTAGCTGTCACCATGGTTATCGTCAAGCTCGGTCTTCATGAGAGCTGATAGCT
GTGATGC 660

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Db 167119
GTAGCTGTCACCATGGTTATCGTCAAGCTCGGTCTTCATGAGAGCTGATAGCT
GTGATGC 167060

Qy 661
CATCTTCCTCCTCTTCTTCATATTGGCTCTGTCCTGCCTTGTCTGCTCCCATGT
GGGTTC 720

|||||

Db 167059
CATCTTCCTCCTCTTCTTCATATTGGCTCTGTCCTGCCTTGTCTGCTCCCATGT
GGGTTC 167000

Qy 721
AGGAGGAGATCATGTTCTTTTAATCTTGGTGGAATGTTGTTGTCGCTTATGC
TTCTCTG 780

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Db 166999
AGGAGGAGATCATGTTCTTTTAATCTTGGTGGAATGTTGTTGTCGCTTATGC
TTCTCTG 166940

Qy 781
GTTGCGCTCTTGACTTGCTTAGCTTCATTCTTTATCTCCAAATTGCTATGAAAT
CAATTT 840

|||||

Db 166939
GTTTCGCCTCTTGACTTGCTTAGCTTCATTCTTTATCTCCAAATTGCTATGAAAT
CAATTT 166880

Qy 841
ACCATAAGTAGAATAAACTTGCAGATTCATTCTATTATTGCTTAAGCTTTTGT
TAATCAA 900

||||| ||||||||||||||||||||||||||||||||||
Db 166879
ACCATACGTAGAATAAACTTGCAGATTCATTCTATTATTGCTTAAGCTTTTGT
TAATCAA 166820

Qy 901
CAAAGAAACCAGAGACGAGAAATACAAACTCTATAAGCTTCTCTTTTTTCTTT
CTTGATA 960

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Db 166819
CAAAGAAACCAGAGACGAGAAATACAAACTCTATAAGCTTCTCTTTTTTCTTT
CTTGATA 166760

Qy 961
GTAAAACCGGTTAGAGAGTAGAGATTGATCATATGAACTAAAAATCGATACT
AAAACGGT 1020

||||| ||||||||||||||||||||||||||||||||||
Db 166759
GTAAAACCGGTTAGAGAGTAGAGATTGATCATATGAACTAAAAATCGATACT
AAAACGGT 166700

Qy 1021
TTGGCTCCGACTTATAAACCGGAACCCACCGTTTTGCATCTCTCTCTCAAAC
ATCACAC 1080

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Db 166699
TTGGCTCCGACTTATAAACCGGAACCCACCGTTTTGCATCTCTCTCTCAAAC
ATCACAC 166640

Qy 1081
AATGTCCAAGATGAAGAAGTATTTGTGTTGTCATCTCTCTGGGTGAGGAGAT
GCAAATGT 1140

||||| ||||||||||||||||||||||||||||||||||
Db 166639
AATGTCCAAGATGAAGAAGTATTTGTGTTGTCATCTCTCTGGGTGAGGAGAT
GCAAATGT 166580

Qy 1141
TATATTCTAATTGTTTTTCAGTGCTTGGTCTAACTTTTTTAAGAGATTACTCCCA
GTGGTT 1200

|||||

Db 166579
TATATTCTAATTGTTTTTCAGTGCTTGGTCTAACTTTTTTAAGAGATTACTCCCA
GTGGTT 166520

Qy 1201
GGATCAAAGAAAGAGTCAACATTGCATTGTGTAAGGTGACGAAAAGTGGTT
AAAGTAAG 1260

|||||

Db 166519
GGATCAAAGAAAGAGTCAACATTGCATTGTGTAAGGTGACGAAAAGTGGTT
AAAGTAAG 166460

Qy 1261
TGAGAACAACTTCAATGCTTTTCTTGACAACTGTGTAATCATCGCATT
TGAATAT 1320

|||||

Db 166459
TGAGAACAACTTCAATGCTTTTCTTGACAACTGTGTAATCATCGCATT
TGAATAT 166400

Qy 1321
ATATGTATATGATGCTTATGATGAAGCTATGAGAATAGGCAAATAGGGTCTG
TGTTATTT 1380

|||||

Db 166399
ATATGTATATGATGCTTATGATGAAGCTATGAGAATAGGCAAATAGGGTCTG
TGTTATTT 166340

Qy 1381
CCCTGCGATTCTAGATTCTGATTTGTTTTTCCTTCTTAATATTTAGATTAGGTG
GTCTTG 1440

|||||

Db 166339
CCCTGCGATTCTAGATTCTGATTTGTTTTTCCTTCTTAATATTTAGATTAGGTG
GTCTTG 166280

Qy 1441
CTTATCCTGTTTTAGTATTAGAGTCGGAGTTTGGGGATGAATCATCCCGGAT
GATATAT 1500

|||||

Db 166279

CTTATCCTGTTTTAGTATTAGAGTCGGAGTTTTGGGGATGAATCATCCCGGAT
GATATAT 166220

Qy 1501

ACAATTGTGTATTTTATGAATTCAGTTTTTAGTGGATAATGAACACGTTAAC
1553



Db 166219

ACAATTGTGTATTTTATGAATTCAGTTTTTAGTGGATAATGAACACGTTAAC
166167

OM nucleic - nucleic search, using sw model

Run on: March 4, 2007, 14:08:20 ; Search time 2626 Seconds
(without alignments)
9657.913 Million cell updates/sec

Title: US-10-613-053A-2
Perfect score: 2064
Sequence: 1 atgttgctagggtttgtgg.....atctatcattgggggatga 2064

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 18892170 seqs, 6143817638 residues

Total number of hits satisfying chosen parameters: 37784340

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published_Applications_NA_Main:*

- 1: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US07_PUBCOMB.seq:*
- 2: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US08_PUBCOMB.seq:*
- 3: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09A_PUBCOMB.seq:*
- 4: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09B_PUBCOMB.seq:*
- 5: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US09C_PUBCOMB.seq:*
- 6: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10A_PUBCOMB.seq:*
- 7: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10B_PUBCOMB.seq:*
- 8: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10C_PUBCOMB.seq:*
- 9: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10D_PUBCOMB.seq:*
- 10: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10E_PUBCOMB.seq:*
- 11: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10F_PUBCOMB.seq:*
- 12: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US10G_PUBCOMB.seq:*
- 13: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11A_PUBCOMB.seq:*
- 14: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11B_PUBCOMB.seq:*
- 15: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11C_PUBCOMB.seq:*
- 16: /EMC_Celerra_SIDS3/ptodata/2/pubpna/US11D_PUBCOMB.seq:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

RESULT 9

US-10-195-144-89

; Sequence 89, Application US/10195144

; Publication No. US20030126646A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0136

; CURRENT APPLICATION NUMBER: US/10/195,144

; CURRENT FILING DATE: 2002-10-01

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 128

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 89

; LENGTH: 2124

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: CDS

; LOCATION: (1)..(2121)

US-10-195-144-89

Query Match 99.0%; Score 2044; DB 7; Length 2124;

Best Local Similarity 100.0%; Pred. No. 0;

Matches 2044; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1

ATGTTGGCTAGGGTTTGTGGATTCAAGTGTTCTTCTTCCTGCTGAGTCTGCG
GCTAGA 60

|||||

Db 1

ATGTTGGCTAGGGTTTGTGGATTCAAGTGTTCTTCTTCCTGCTGAGTCTGCG
GCTAGA 60

Qy 61
TTGTTCTGTACGAGATCGATTTCGTGATACTCTGGCCAAGGCAAGCGGAGAGA
GTTGCGAA 120

|||||

Db 61
TTGTTCTGTACGAGATCGATTTCGTGATACTCTGGCCAAGGCAAGCGGAGAGA
GTTGCGAA 120

Qy 121
GCAGGTTTTGGAGGAGAGAGTTTGAAGCTGCAAAGTGGGTTTCATGAAATCA
AAGGTTTA 180

|||||

Db 121
GCAGGTTTTGGAGGAGAGAGTTTGAAGCTGCAAAGTGGGTTTCATGAAATCA
AAGGTTTA 180

Qy 181
GAGGATGCGATTGATTTGTTTCAGTGACATGCTTCGATCTCGTCCTTTACCTTCT
GTGGTT 240

|||||

Db 181
GAGGATGCGATTGATTTGTTTCAGTGACATGCTTCGATCTCGTCCTTTACCTTCT
GTGGTT 240

Qy 241
GATTTCTGTAAATTGATGGGTGTGGTGGTGAGAATGGAACGCCCGGATCTTG
TGATTTCT 300

|||||

Db 241
GATTTCTGTAAATTGATGGGTGTGGTGGTGAGAATGGAACGCCCGGATCTTG
TGATTTCT 300

Qy 301
CTCTATCAGAAGATGGAAAGGAAACAGATTCGATGTGATATATACAGCTTCA
ATATTCTG 360

|||||

Db 301
CTCTATCAGAAGATGGAAAGGAAACAGATTCGATGTGATATATACAGCTTCA
ATATTCTG 360

Qy 361
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AAGATC 420

|||||

Db 361
ATAAAATGTTTCTGCAGCTGCTCTAAGCTCCCCTTTGCTTTGTCTACATTTGGT
AAGATC 420

Qy 421
ACCAAGCTTGGACTCCACCCTGATGTTGTTACCTTCACCACCCTGCTCCATGG
ATTATGT 480

|||||

Db 421
ACCAAGCTTGGACTCCACCCTGATGTTGTTACCTTCACCACCCTGCTCCATGG
ATTATGT 480

Qy 481
GTGGAAGATAGGGTTTCTGAAGCCTTGGATTTTTTTCATCAAATGTTTGAAAC
GACATGT 540

|||||

Db 481
GTGGAAGATAGGGTTTCTGAAGCCTTGGATTTTTTTCATCAAATGTTTGAAAC
GACATGT 540

Qy 541
AGGCCCAATGTCGTAACCTTCACCACTTTGATGAACGGTCTTTGCCGCGAGGG
TAGAATT 600

|||||

Db 541
AGGCCCAATGTCGTAACCTTCACCACTTTGATGAACGGTCTTTGCCGCGAGGG
TAGAATT 600

Qy 601
GTCGAAGCCGTAGCTCTGCTTGATCGGATGATGGAAGATGGTCTCCAGCCTA
CCCAGATT 660

|||||

Db 601
GTCGAAGCCGTAGCTCTGCTTGATCGGATGATGGAAGATGGTCTCCAGCCTA
CCCAGATT 660

Qy 661
ACTTATGGAACAATCGTAGATGGGATGTGTAAGAAGGGAGATACTGTGTCTG
CACTGAAT 720

|||||

Db 661
ACTTATGGAACAATCGTAGATGGGATGTGTAAGAAGGGAGATACTGTGTCTG
CACTGAAT 720

Qy 721
CTGCTGAGGAAGATGGAGGAGGTGAGCCACATCATACCCAATGTTGTAATCT
ATAGTGCA 780

|||||

Db 721
CTGCTGAGGAAGATGGAGGAGGTGAGCCACATCATACCCAATGTTGTAATCT
ATAGTGCA 780

Qy 781
ATCATTGATAGCCTTTGTAAAGACGGACGTCATAGCGATGCACAAAATCTTTT
CACTGAA 840

|||||

Db 781
ATCATTGATAGCCTTTGTAAAGACGGACGTCATAGCGATGCACAAAATCTTTT
CACTGAA 840

Qy 841
ATGCAAGAGAAAGGAATCTTTCCCGATTTATTTACCTACAACAGTATGATAGT
TGGTTTT 900

|||||

Db 841
ATGCAAGAGAAAGGAATCTTTCCCGATTTATTTACCTACAACAGTATGATAGT
TGGTTTT 900

Qy 901
TG TAGCTCTGGTAGATGGAGCGACGCGGAGCAGTTGTTGCAAGAAATGTTAG
AAAGGAAG 960

|||||

Db 901
TG TAGCTCTGGTAGATGGAGCGACGCGGAGCAGTTGTTGCAAGAAATGTTAG
AAAGGAAG 960

Qy 961
ATCAGCCCTGATGTTGTAACCTATAATGCTTTGATCAATGCATTTGTCAAGGA
AGGCAAG 1020

|||||

Db 961
ATCAGCCCTGATGTTGTAACCTATAATGCTTTGATCAATGCATTTGTCAAGGA
AGGCAAG 1020

Qy 1021
TTCTTTGAGGCTGAAGAATTATACGATGAGATGCTTCCAAGGGGTATAATCCC
TAATACA 1080

|||||

Db 1021
TTCTTTGAGGCTGAAGAATTATACGATGAGATGCTTCCAAGGGGTATAATCCC
TAATACA 1080

Qy 1081
ATCACATATAGTTCAATGATCGATGGATTTTGCAAACAGAATCGTCTTGATGC
TGCTGAG 1140

|||||

Db 1081
ATCACATATAGTTCAATGATCGATGGATTTTGCAAACAGAATCGTCTTGATGC
TGCTGAG 1140

Qy 1141
CACATGTTTTATTTGATGGCTACCAAGGGCTGCTCTCCCAACCTAATCACTTT
CAATACT 1200

|||||

Db 1141
CACATGTTTTATTTGATGGCTACCAAGGGCTGCTCTCCCAACCTAATCACTTT
CAATACT 1200

Qy 1201
CTCATAGACGGATATTGTGGGGCTAAGAGGATAGATGATGGAATGGAACTTC
TCCATGAG 1260

|||||

Db 1201
CTCATAGACGGATATTGTGGGGCTAAGAGGATAGATGATGGAATGGAACTTC
TCCATGAG 1260

Qy 1261
ATGACTGAAACAGGATTAGTTGCTGACACAACACTACTTACAACACTCTTATTCA
CGGGTTC 1320

|||||

Db 1261
ATGACTGAAACAGGATTAGTTGCTGACACAACACTACTTACAACACTCTTATTCA
CGGGTTC 1320

Qy 1321
TATCTGGTGGGCGATCTTAATGCTGCTCTAGACCTTTTACAAGAGATGATCTC
TAGTGGT 1380

|||||

Db 1321
TATCTGGTGGGCGATCTTAATGCTGCTCTAGACCTTTTACAAGAGATGATCTC
TAGTGGT 1380

Qy 1381
TTGTGCCCTGATATCGTTACTTGTGACACTTTGCTGGATGGTCTCTGCGATAA
TGGGAAA 1440

|||||

Db 1381
TTGTGCCCTGATATCGTTACTTGTGACACTTTGCTGGATGGTCTCTGCGATAA
TGGGAAA 1440

Qy 1441
CTAAAAGATGCATTGGAAATGTTTAAGGTTATGCAGAAGAGTAAGAAGGATC
TTGATGCT 1500

|||||

Db 1441
CTAAAAGATGCATTGGAAATGTTTAAGGTTATGCAGAAGAGTAAGAAGGATC
TTGATGCT 1500

Qy 1501
AGTCACCCCTTCAATGGTGTGGAACCTGATGTTCAAACCTACAATATATTGAT
CAGCGGC 1560

|||||

Db 1501
AGTCACCCCTTCAATGGTGTGGAACCTGATGTTCAAACCTACAATATATTGAT
CAGCGGC 1560

Qy 1561
TTGATCAATGAAGGGAAGTTTTTAGAGGCCGAGGAATTATACGAGGAGATGC
CCCACAGG 1620

|||||

Db 1561
TTGATCAATGAAGGGAAGTTTTTAGAGGCCGAGGAATTATACGAGGAGATGC
CCCACAGG 1620

Qy 1621
GGTATAGTCCCAGATACTATCACCTATAGCTCAATGATCGATGGATTATGCAA
GCAGAGC 1680

|||||

Db 1621
GGTATAGTCCCAGATACTATCACCTATAGCTCAATGATCGATGGATTATGCAA
GCAGAGC 1680

Qy 1681
CGCCTAGATGAGGCTACACAAATGTTTGATTGATGGGTAGCAAGAGCTTCT
CTCCAAAC 1740

|||||

Db 1681
CGCCTAGATGAGGCTACACAAATGTTTGATTTCGATGGGTAGCAAGAGCTTCT
CTCCAAAC 1740

Qy 1741
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ATGATGGG 1800

|||||

Db 1741
GTAGTGACCTTTACTACACTCATTAATGGCTACTGTAAGGCAGGAAGGGTTG
ATGATGGG 1800

Qy 1801
CTGGAGCTTTTCTGCGAGATGGGTCTGAAGAGGGATAGTTGCTAACGCAATTA
CTTACATC 1860

|||||

Db 1801
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CTTACATC 1860

Qy 1861
ACTTTGATTTGTGGTTTTTCGTAAAGTGGGTAATATTAATGGGGCTCTAGACAT
TTTCCAG 1920

|||||

Db 1861
ACTTTGATTTGTGGTTTTTCGTAAAGTGGGTAATATTAATGGGGCTCTAGACAT
TTTCCAG 1920

Qy 1921
GAGATGATTTCAAGTGGTGTGTATCCTGATACCATTACCATCCGCAATATGCT
GACTGGT 1980

|||||

Db 1921
GAGATGATTTCAAGTGGTGTGTATCCTGATACCATTACCATCCGCAATATGCT
GACTGGT 1980

Qy 1981
TTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCTTGAGAACTG
CAGATGAGT 2040

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Db 1981
TTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCTTGAGAACTG
CAGATGAGT 2040

Qy 2041 ATGG 2044

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Db 2041 ATGG 2044

RESULT 10

US-10-345-072-89

; Sequence 89, Application US/10345072

; Publication No. US20030237112A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; APPLICANT: LAI, FANG MING

; APPLICANT: LEFOREST, MARTIN

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0210

; CURRENT APPLICATION NUMBER: US/10/345,072

; CURRENT FILING DATE: 2003-01-16

; PRIOR APPLICATION NUMBER: PCT/US02/22217

; PRIOR FILING DATE: 2002-07-12

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 179

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 89

; LENGTH: 2124

; TYPE: DNA

; ORGANISM: Raphanus sativum

; FEATURE:

; NAME/KEY: CDS

; LOCATION: (1)..(2121)

US-10-345-072-89

Query Match 99.0%; Score 2044; DB 7; Length 2124;

Best Local Similarity 100.0%; Pred. No. 0;

Matches 2044; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1
ATGTTGGCTAGGGTTTGTGGATTCAAGTGTTCTTCTTCTCCTGCTGAGTCTGCG
GCTAGA 60

|||||

Db 1
ATGTTGGCTAGGGTTTGTGGATTCAAGTGTTCTTCTTCTCCTGCTGAGTCTGCG
GCTAGA 60

Qy 61
TTGTTCTGTACGAGATCGATTCGTGATACTCTGGCCAAGGCAAGCGGAGAGA
GTTGCGAA 120

|||||

Db 61
TTGTTCTGTACGAGATCGATTCGTGATACTCTGGCCAAGGCAAGCGGAGAGA
GTTGCGAA 120

Qy 121
GCAGGTTTTGGAGGAGAGAGTTTGAAGCTGCAAAGTGGGTTTCATGAAATCA
AAGGTTA 180

|||||

Db 121
GCAGGTTTTGGAGGAGAGAGTTTGAAGCTGCAAAGTGGGTTTCATGAAATCA
AAGGTTA 180

Qy 181
GAGGATGCGATTGATTTGTTTCAGTGACATGCTTCGATCTCGTCCTTTACCTTCT
GTGGTT 240

|||||

Db 181
GAGGATGCGATTGATTTGTTTCAGTGACATGCTTCGATCTCGTCCTTTACCTTCT
GTGGTT 240

Qy 241
GATTTCTGTAAATTGATGGGTGTGGTGGTGAGAAATGGAACGCCCGGATCTTG
TGATTCT 300

|||||

Db 241
GATTTCTGTAAATTGATGGGTGTGGTGGTGAGAAATGGAACGCCCGGATCTTG
TGATTCT 300

Qy 301
CTCTATCAGAAGATGGAAAGGAAACAGATTCGATGTGATATATACAGCTTCA
ATATTCTG 360

|||||

Db 301
CTCTATCAGAAGATGGAAAGGAAACAGATTTCGATGTGATATATACAGCTTCA
ATATTCTG 360

Qy 361
ATAAAATGTTTCTGCAGCTGCTCTAAGCTCCCCTTTGCTTTGTCTACATTTGGT
AAGATC 420

|||||

Db 361
ATAAAATGTTTCTGCAGCTGCTCTAAGCTCCCCTTTGCTTTGTCTACATTTGGT
AAGATC 420

Qy 421
ACCAAGCTTGGACTCCACCCTGATGTTGTTACCTTCACCACCCTGCTCCATGG
ATTATGT 480

|||||

Db 421
ACCAAGCTTGGACTCCACCCTGATGTTGTTACCTTCACCACCCTGCTCCATGG
ATTATGT 480

Qy 481
GTGGAAGATAGGGTTTCTGAAGCCTTGGATTTTTTTCATCAAATGTTTGAAAC
GACATGT 540

|||||

Db 481
GTGGAAGATAGGGTTTCTGAAGCCTTGGATTTTTTTCATCAAATGTTTGAAAC
GACATGT 540

Qy 541
AGGCCCAATGTCGTAACCTTCACCACTTTGATGAACGGTCTTTGCCGCGAGGG
TAGAATT 600

|||||

Db 541
AGGCCCAATGTCGTAACCTTCACCACTTTGATGAACGGTCTTTGCCGCGAGGG
TAGAATT 600

Qy 601
GTCGAAGCCGTAGCTCTGCTTGATCGGATGATGGAAGATGGTCTCCAGCCTA
CCCAGATT 660

|||||

Db 601
GTCGAAGCCGTAGCTCTGCTTGATCGGATGATGGAAGATGGTCTCCAGCCTA
CCCAGATT 660

Qy 661
ACTTATGGAACAATCGTAGATGGGATGTGTAAGAAGGGAGATACTGTGTCTG
CACTGAAT 720

|||||

Db 661
ACTTATGGAACAATCGTAGATGGGATGTGTAAGAAGGGAGATACTGTGTCTG
CACTGAAT 720

Qy 721
CTGCTGAGGAAGATGGAGGAGGTGAGCCACATCATACCCAATGTTGTAATCT
ATAGTGCA 780

|||||

Db 721
CTGCTGAGGAAGATGGAGGAGGTGAGCCACATCATACCCAATGTTGTAATCT
ATAGTGCA 780

Qy 781
ATCATTGATAGCCTTTGTAAAGACGGACGTCATAGCGATGCACAAAATCTTTT
CACTGAA 840

|||||

Db 781
ATCATTGATAGCCTTTGTAAAGACGGACGTCATAGCGATGCACAAAATCTTTT
CACTGAA 840

Qy 841
ATGCAAGAGAAAGGAATCTTTCCCGATTTATTTACCTACAACAGTATGATAGT
TGGTTTT 900

|||||

Db 841
ATGCAAGAGAAAGGAATCTTTCCCGATTTATTTACCTACAACAGTATGATAGT
TGGTTTT 900

Qy 901
TG TAGCTCTGGTAGATGGAGCGACGCGGAGCAGTTGTTGCAAGAAATGTTAG
AAAGGAAG 960

|||||

Db 901
TG TAGCTCTGGTAGATGGAGCGACGCGGAGCAGTTGTTGCAAGAAATGTTAG
AAAGGAAG 960

Qy 961
ATCAGCCCTGATGTTGTA ACTTATAATGCTTTGATCAATGCATTTGTCAAGGA
AGGCAAG 1020

|||||

Db 961
ATCAGCCCTGATGTTGTAACCTATAATGCTTTGATCAATGCATTTGTCAAGGA
AGGCAAG 1020

Qy 1021
TTCTTTGAGGCTGAAGAATTATACGATGAGATGCTTCCAAGGGGTATAATCCC
TAATACA 1080

|||||

Db 1021
TTCTTTGAGGCTGAAGAATTATACGATGAGATGCTTCCAAGGGGTATAATCCC
TAATACA 1080

Qy 1081
ATCACATATAGTTCAATGATCGATGGATTTTGCAAACAGAATCGTCTTGATGC
TGCTGAG 1140

|||||

Db 1081
ATCACATATAGTTCAATGATCGATGGATTTTGCAAACAGAATCGTCTTGATGC
TGCTGAG 1140

Qy 1141
CACATGTTTTATTTGATGGCTACCAAGGGCTGCTCTCCCAACCTAATCACTTT
CAATACT 1200

|||||

Db 1141
CACATGTTTTATTTGATGGCTACCAAGGGCTGCTCTCCCAACCTAATCACTTT
CAATACT 1200

Qy 1201
CTCATAGACGGATATTGTGGGGCTAAGAGGATAGATGATGGAATGGAACCTC
TCCATGAG 1260

|||||

Db 1201
CTCATAGACGGATATTGTGGGGCTAAGAGGATAGATGATGGAATGGAACCTC
TCCATGAG 1260

Qy 1261
ATGACTGAAACAGGATTAGTTGCTGACACAACCTACTTACAACACTCTTATTCA
CGGGTTC 1320

|||||

Db 1261
ATGACTGAAACAGGATTAGTTGCTGACACAACCTACTTACAACACTCTTATTCA
CGGGTTC 1320

Qy 1321
TATCTGGTGGGCGATCTTAATGCTGCTCTAGACCTTTTACAAGAGATGATCTC
TAGTGGT 1380

|||||

Db 1321
TATCTGGTGGGCGATCTTAATGCTGCTCTAGACCTTTTACAAGAGATGATCTC
TAGTGGT 1380

Qy 1381
TTGTGCCCTGATATCGTTACTTGTGACACTTTGCTGGATGGTCTCTGCGATAA
TGGGAAA 1440

|||||

Db 1381
TTGTGCCCTGATATCGTTACTTGTGACACTTTGCTGGATGGTCTCTGCGATAA
TGGGAAA 1440

Qy 1441
CTAAAAGATGCATTGGAAATGTTTAAGGTTATGCAGAAGAGTAAGAAGGATC
TTGATGCT 1500

|||||

Db 1441
CTAAAAGATGCATTGGAAATGTTTAAGGTTATGCAGAAGAGTAAGAAGGATC
TTGATGCT 1500

Qy 1501
AGTCACCCCTTCAATGGTGTGGAACCTGATGTTCAAACCTACAATATATTGAT
CAGCGGC 1560

|||||

Db 1501
AGTCACCCCTTCAATGGTGTGGAACCTGATGTTCAAACCTACAATATATTGAT
CAGCGGC 1560

Qy 1561
TTGATCAATGAAGGGAAGTTTTTAGAGGCCGAGGAATTATACGAGGAGATGC
CCCACAGG 1620

|||||

Db 1561
TTGATCAATGAAGGGAAGTTTTTAGAGGCCGAGGAATTATACGAGGAGATGC
CCCACAGG 1620

Qy 1621
GGTATAGTCCCAGATACTATCACCTATAGCTCAATGATCGATGGATTATGCAA
GCAGAGC 1680

|||||

Db 1621
GGTATAGTCCCAGATACTATCACCTATAGCTCAATGATCGATGGATTATGCAA
GCAGAGC 1680

Qy 1681
CGCCTAGATGAGGCTACACAAATGTTTGATTTCGATGGGTAGCAAGAGCTTCT
CTCCAAAC 1740

|||||

Db 1681
CGCCTAGATGAGGCTACACAAATGTTTGATTTCGATGGGTAGCAAGAGCTTCT
CTCCAAAC 1740

Qy 1741
GTAGTGACCTTTACTACACTCATTAATGGCTACTGTAAGGCAGGAAGGGTTG
ATGATGGG 1800

|||||

Db 1741
GTAGTGACCTTTACTACACTCATTAATGGCTACTGTAAGGCAGGAAGGGTTG
ATGATGGG 1800

Qy 1801
CTGGAGCTTTTCTGCGAGATGGGTCTGAAGAGGGATAGTTGCTAACGCAATTA
CTTACATC 1860

|||||

Db 1801
CTGGAGCTTTTCTGCGAGATGGGTCTGAAGAGGGATAGTTGCTAACGCAATTA
CTTACATC 1860

Qy 1861
ACTTTGATTTGTGGTTTTTCGTAAAGTGGGTAATATTAATGGGGCTCTAGACAT
TTTCCAG 1920

|||||

Db 1861
ACTTTGATTTGTGGTTTTTCGTAAAGTGGGTAATATTAATGGGGCTCTAGACAT
TTTCCAG 1920

Qy 1921
GAGATGATTTCAAGTGGTGTGTATCCTGATACCATTACCATCCGCAATATGCT
GACTGGT 1980

|||||

Db 1921
GAGATGATTTCAAGTGGTGTGTATCCTGATACCATTACCATCCGCAATATGCT
GACTGGT 1980

Qy 1981

TTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCTTGAGAACTG
CAGATGAGT 2040



Db 1981

TTATGGAGTAAAGAGGAACTAAAAAGGGCAGTGGCAATGCTTGAGAACTG
CAGATGAGT 2040

Qy 2041 ATGG 2044



Db 2041 ATGG 2044

OM protein - protein search, using sw model

Run on: March 3, 2007, 09:41:39 ; Search time 188 Seconds
(without alignments)
1692.705 Million cell updates/sec

Title: US-10-613-053A-3
Perfect score: 3573
Sequence: 1
MLARVCGFKCSSSPAESAAR.....KRAVAMLEKLQMSMDLSFGG 687

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 2097797 seqs, 463214858 residues

Total number of hits satisfying chosen parameters: 2097797

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : Published_Applications_AA_Main:*
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2: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US08_PUBCOMB.pep:*
3: /EMC_Celerra_SIDS3/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

RESULT 1

US-10-345-072-179

; Sequence 179, Application US/10345072

; Publication No. US20030237112A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; APPLICANT: LAI, FANG MING

; APPLICANT: LEFOREST, MARTIN

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0210

; CURRENT APPLICATION NUMBER: US/10/345,072

; CURRENT FILING DATE: 2003-01-16

; PRIOR APPLICATION NUMBER: PCT/US02/22217

; PRIOR FILING DATE: 2002-07-12

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 179

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 179

; LENGTH: 687

; TYPE: PRT

; ORGANISM: Raphanus sativum

US-10-345-072-179

Query Match 100.0%; Score 3573; DB 4; Length 687;

Best Local Similarity 100.0%; Pred. No. 9.2e-318;

Matches 687; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1

MLARVCGFKCSSPAESAARLFCTRSIRDTLAKASGESCEAGFGGESLKLQSGFH
EIKGL 60



Db 1
MLARVCGFKCSSSPAESAARLFCTRSIRDTLAKASGESCEAGFGGESLKLQSGFH
EIKGL 60

Qy 61
EDAIDLFSDMLRSRPLPSVVD FCKLMGVVVRMERPD LVISLYQKMERKQIRCDIY
SFNIL 120

|||||

Db 61
EDAIDLFSDMLRSRPLPSVVD FCKLMGVVVRMERPD LVISLYQKMERKQIRCDIY
SFNIL 120

Qy 121
IKCFCSCKLPFALSTFGKITKLGLHPDVVTFTLLHGLCVEDRVSEALDFFHQMF
ETTC 180

|||||

Db 121
IKCFCSCKLPFALSTFGKITKLGLHPDVVTFTLLHGLCVEDRVSEALDFFHQMF
ETTC 180

Qy 181
RPNVVTFTTLMNGLCREGRIVEAVALDRMMEDGLQPTQITYGTIVDGMCKKG
DTVSA LN 240

|||||

Db 181
RPNVVTFTTLMNGLCREGRIVEAVALDRMMEDGLQPTQITYGTIVDGMCKKG
DTVSA LN 240

Qy 241
LLRKMEEVSHIIPNVVIYSAIDSLCKDGRHSDAQNLFTMQEKGIFPDLFTYNSMI
VGF 300

|||||

Db 241
LLRKMEEVSHIIPNVVIYSAIDSLCKDGRHSDAQNLFTMQEKGIFPDLFTYNSMI
VGF 300

Qy 301
CSSGRWSDAEQLLQEMLERKISPDVVTYNALINAFVKEGKFFEAEELYDEMLPR
GIIPNT 360

|||||

Db 301
CSSGRWSDAEQLLQEMLERKISPDVVTYNALINAFVKEGKFFEAEELYDEMLPR
GIIPNT 360

Qy 361
ITYSSMIDGFCKQNRLDAAEHMFYLMATKGCSPNLITFNTLIDGYCGAKRIDDG
MELLHE 420

|||||

Db 361
ITYSSMIDGFCKQNRLDAAEHMFYLMATKGCSPNLITFNTLIDGYCGAKRIDDG
MELLHE 420

Qy 421
MTETGLVADTTTYNTLIHGFYLVGDLNAAALLQEMISSGLCPDIVTCDTLLDGL
CDNGK 480

|||||

Db 421
MTETGLVADTTTYNTLIHGFYLVGDLNAAALLQEMISSGLCPDIVTCDTLLDGL
CDNGK 480

Qy 481
LKDALEMFKVMQKSKKDL DASHPFNGVEPDVQTYNILISGLINEGKFLEAEELYE
EMPHR 540

|||||

Db 481
LKDALEMFKVMQKSKKDL DASHPFNGVEPDVQTYNILISGLINEGKFLEAEELYE
EMPHR 540

Qy 541
GIVPDTITYSSMIDGLCKQSRLDEATQMFDSMGSKSFSPNVVTF TT LINGYCKAG
RVDDG 600

|||||

Db 541
GIVPDTITYSSMIDGLCKQSRLDEATQMFDSMGSKSFSPNVVTF TT LINGYCKAG
RVDDG 600

Qy 601
LELFCEMGRRGIVANAITYITLICGFRKVGNINGALDIFQEMISSGVYPDTITIRNM
LTG 660

|||||

Db 601
LELFCEMGRRGIVANAITYITLICGFRKVGNINGALDIFQEMISSGVYPDTITIRNM
LTG 660

Qy 661 LWSKEELKRAVAMLEKLQMSMDLSFGG 687

|||||

Db 661 LWSKEELKRAVAMLEKLQMSMDLSFGG 687

RESULT 10

US-10-195-144-88

; Sequence 88, Application US/10195144

; Publication No. US20030126646A1

; GENERAL INFORMATION:

; APPLICANT: BROWN, GREGORY G.

; APPLICANT: FORMANOVA, NATASA

; APPLICANT: DENDY, CHARLES

; APPLICANT: LANDRY, BENOIT S.

; APPLICANT: CHEUNG, WING

; APPLICANT: JIN, HUA

; TITLE OF INVENTION: NUCLEAR FERTILITY RESTORER GENES AND
METHODS OF USE IN

; TITLE OF INVENTION: PLANTS

; FILE REFERENCE: 16313-0136

; CURRENT APPLICATION NUMBER: US/10/195,144

; CURRENT FILING DATE: 2002-10-01

; PRIOR APPLICATION NUMBER: 60/305,026

; PRIOR FILING DATE: 2001-07-12

; PRIOR APPLICATION NUMBER: 60/305,363

; PRIOR FILING DATE: 2001-07-13

; PRIOR APPLICATION NUMBER: 60/308,736

; PRIOR FILING DATE: 2001-07-30

; NUMBER OF SEQ ID NOS: 128

; SOFTWARE: PatentIn Ver. 2.1

; SEQ ID NO 88

; LENGTH: 707

; TYPE: PRT

; ORGANISM: Raphanus sativum

US-10-195-144-88

Query Match 99.2%; Score 3543; DB 4; Length 707;

Best Local Similarity 99.6%; Pred. No. 7.4e-315;

Matches 682; Conservative 0; Mismatches 3; Indels 0; Gaps 0;

Qy 1

MLARVCGFKCSSSPAESAARLFCTRSIRDTLAKASGESCEAGFGGESLKLQSGFH
EIKGL 60

|||||

Db 1

MLARVCGFKCSSSPAESAARLFCTRSIRDTLAKASGESCEAGFGGESLKLQSGFH
EIKGL 60

Qy 61
EDAIDLFSDMLRSRPLPSVVD FCKLMGVVVRMERPD LVISLYQKMERKQIRCDIY
SFNIL 120

|||||

Db 61
EDAIDLFSDMLRSRPLPSVVD FCKLMGVVVRMERPD LVISLYQKMERKQIRCDIY
SFNIL 120

Qy 121
IKCFCSCKLPFALSTFGKITKLGLHPDVVTFTLLHGLCVEDRVSEALDFFHQMF
ETTC 180

|||||

Db 121
IKCFCSCKLPFALSTFGKITKLGLHPDVVTFTLLHGLCVEDRVSEALDFFHQMF
ETTC 180

Qy 181
RPNVVTFTTLMNGLCREGRIVEAVALDRMMEDGLQPTQITYGTIVDGMCKKG
DTVSA LN 240

|||||

Db 181
RPNVVTFTTLMNGLCREGRIVEAVALDRMMEDGLQPTQITYGTIVDGMCKKG
DTVSA LN 240

Qy 241
LLRKMEEVSHIPNVVIYSAIDSLCKDGRHSDAQNLFTMQEKGIFPDLFTYNSMI
VGF 300

|||||

Db 241
LLRKMEEVSHIPNVVIYSAIDSLCKDGRHSDAQNLFTMQEKGIFPDLFTYNSMI
VGF 300

Qy 301
CSSGRWSDAEQLLQEMLERKISPDVVTYNALINAFVKEGKFFEAEELYDEMLPR
GIIPNT 360

|||||

Db 301
CSSGRWSDAEQLLQEMLERKISPDVVTYNALINAFVKEGKFFEAEELYDEMLPR
GIIPNT 360

Qy 361
ITYSSMIDGFCKQNRLDAAEHMFYLMATKGCSPLITFNTLIDGYCGAKRIDDG
MELLHE 420

|||||

Db 361
ITYSSMIDGFCKQNRLDAAEHMFYLMATKGCSPLITFNTLIDGYCGAKRIDDG
MELLHE 420

Qy 421
MTETGLVADTTTYNTLIHGFYLVGDLNAALDLLQEMISSGLCPDIVTCDTLLDGL
CDNGK 480

|||||

Db 421
MTETGLVADTTTYNTLIHGFYLVGDLNAALDLLQEMISSGLCPDIVTCDTLLDGL
CDNGK 480

Qy 481
LKDALEMFKVMQKSKKDL DASHPFNGVEPDVQTYNILISGLINEGKFLEAEELYE
EMPHR 540

|||||

Db 481
LKDALEMFKVMQKSKKDL DASHPFNGVEPDVQTYNILISGLINEGKFLEAEELYE
EMPHR 540

Qy 541
GIVPDTITYSSMIDGLCKQSRLDEATQMFDSMGSKSFSPNVVTFTTLINGYCKAG
RVDDG 600

|||||

Db 541
GIVPDTITYSSMIDGLCKQSRLDEATQMFDSMGSKSFSPNVVTFTTLINGYCKAG
RVDDG 600

Qy 601
LELFCMGRRGIVANAITYITLICGFRKVGNINGALDIFQEMISSGVYPDTITIRNM
LTG 660

|||||

Db 601
LELFCMGRRGIVANAITYITLICGFRKVGNINGALDIFQEMISSGVYPDTITIRNM
LTG 660

Qy 661 LWSKEELKRAVAMLEKLQMSMDLSF 685

|||||

Db 661 LWSKEELKRAVAMLEKLQMSMVCKF 685